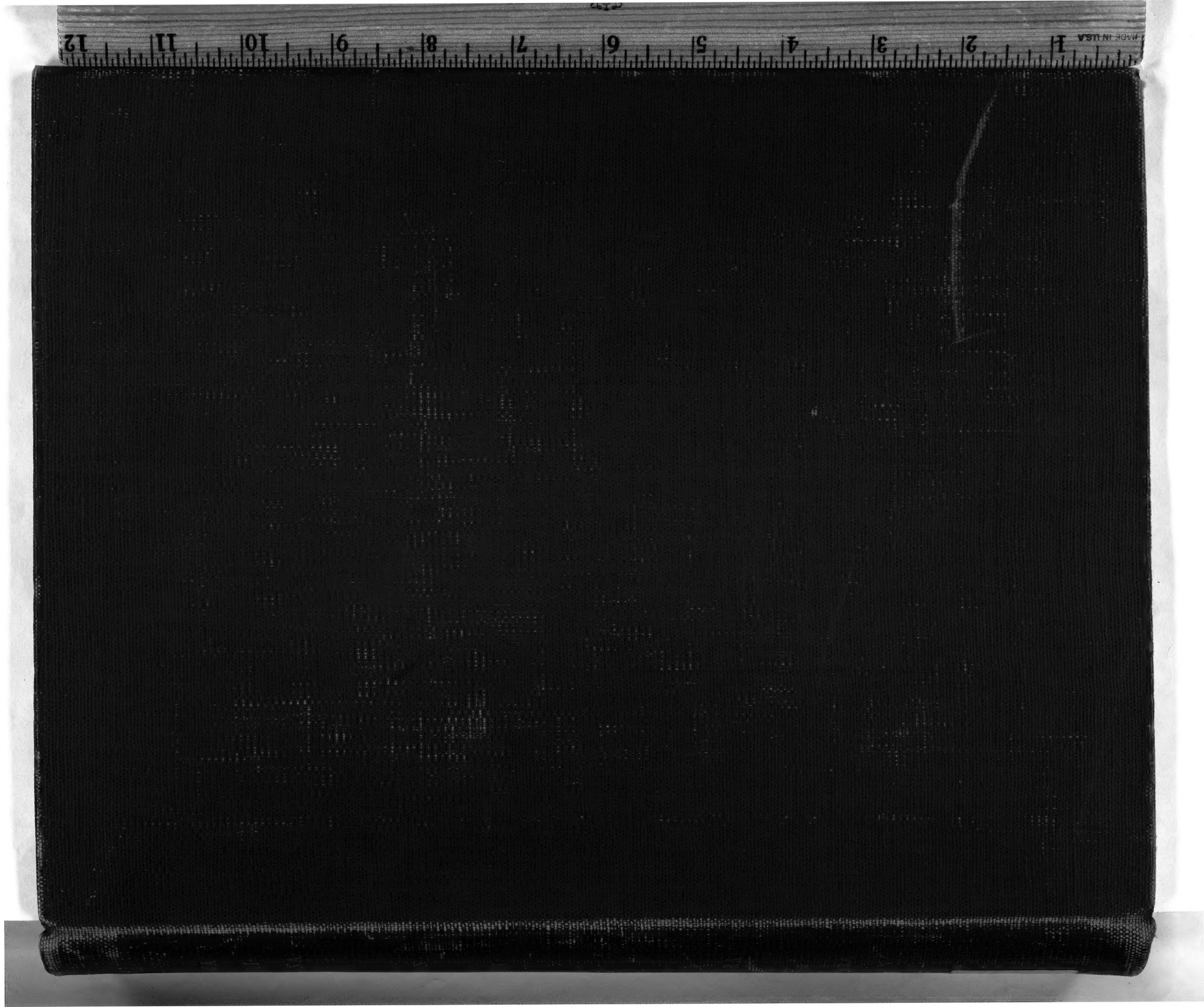

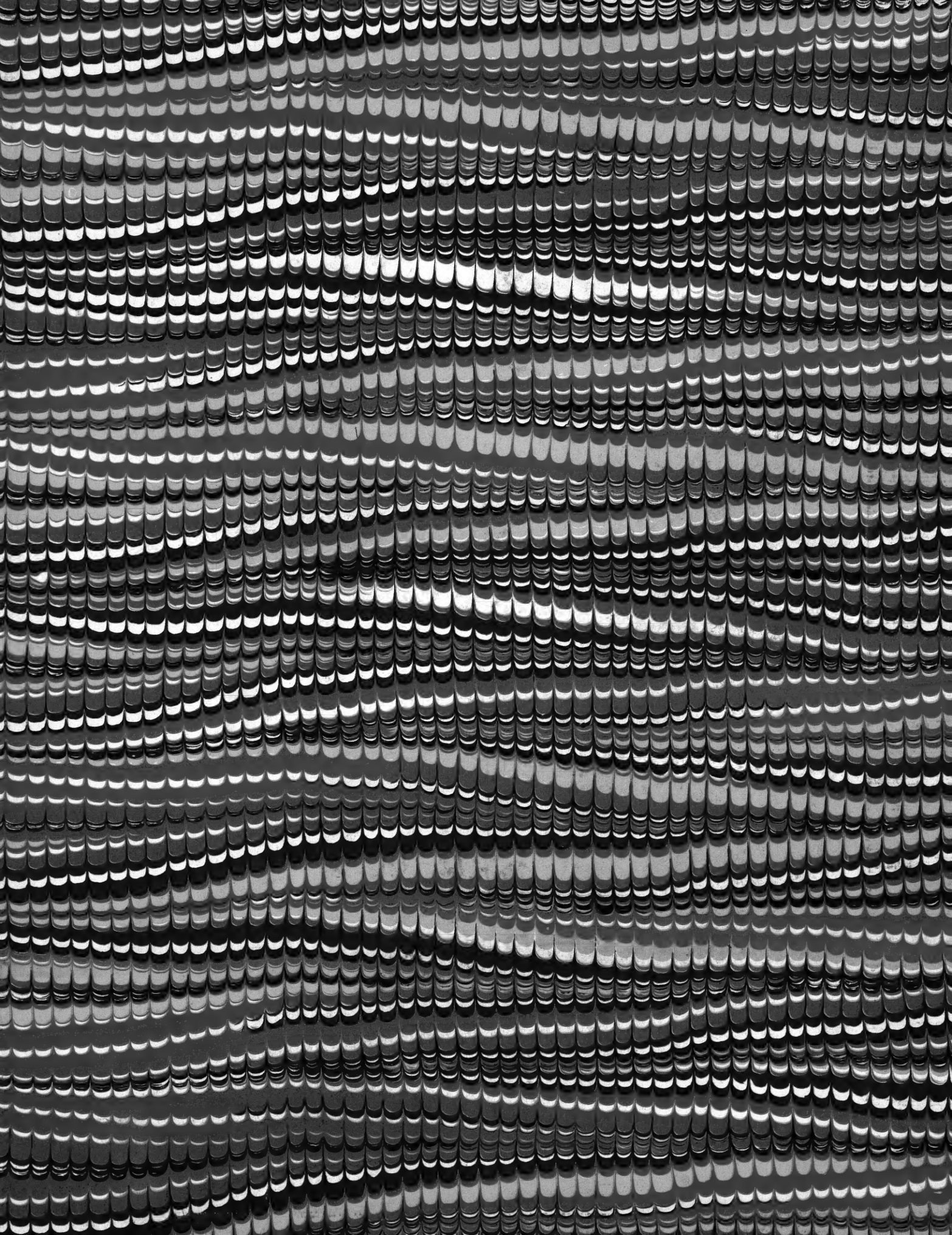

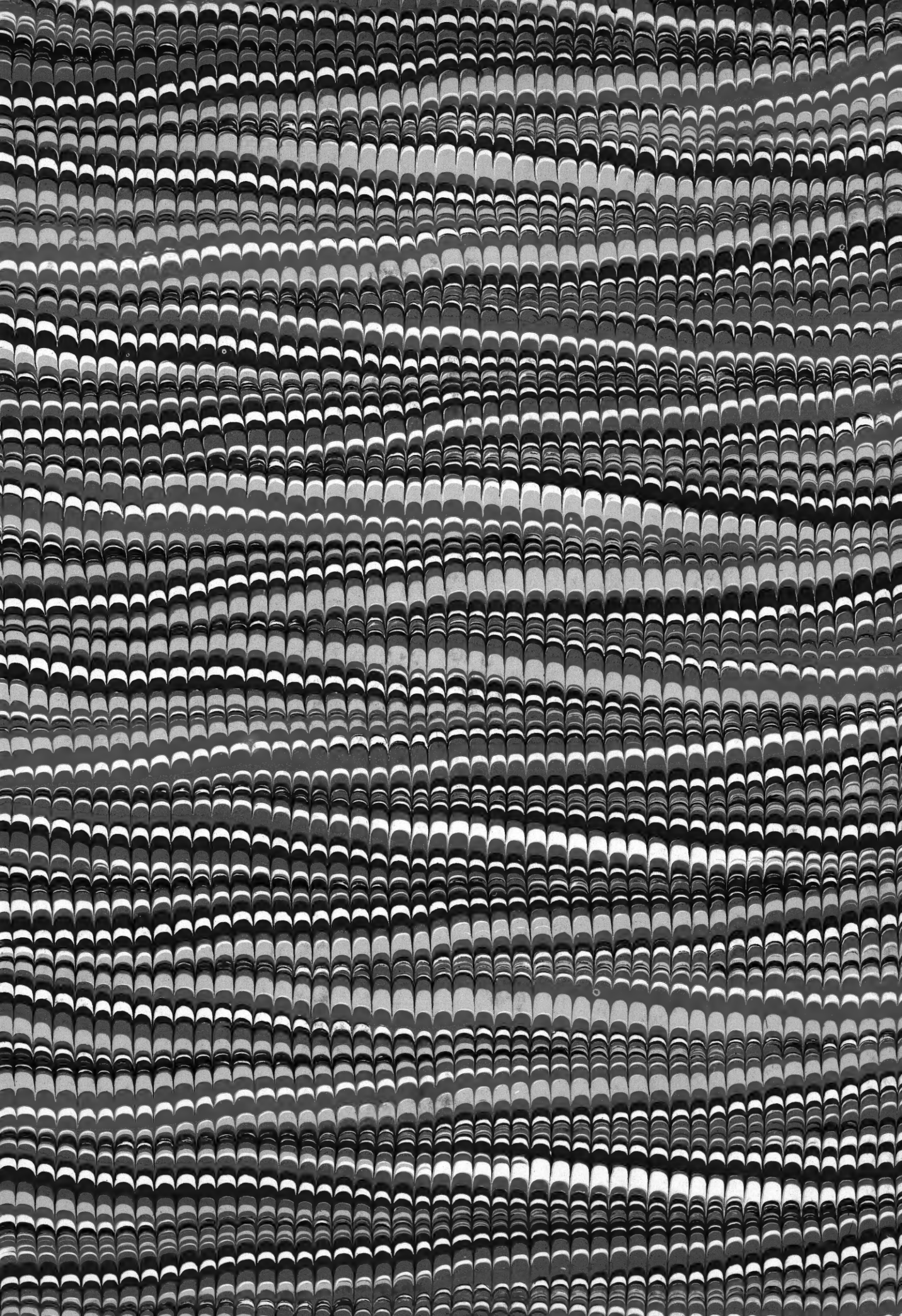

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CENTRALI-AMERICANA.

INSECTA.

COLEOPTERA. Vol. IV. Part 2.

HETEROMERA (part).

BY

GEORGE C. CHAMPION, F.Z.S.

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ERRATA ET CORRIGENDA.

Page	Line	
111	9	dele the words (except in *C. dugesi*).
205	1	*for* XI. *read* IX.
387	26	for *Jodema* read *Iodema*.
421	29	for *nigra* read *atra*.

595.76

BIOLOGIA CENTRALI-AMERICANA.

ZOOLOGIA.

Class INSECTA.

Order COLEOPTERA.

Tribe HETEROMERA *(continued)*.

Fam. LAGRIIDÆ.

The bulk of the Central-American representatives of this family belong to one genus, *Statira*; a few are referable to *Colparthrum*; and for the remainder several new genera are required. These latter are chiefly based upon the structure of the mandibles and labial palpi, characters first noticed by Kirsch in the genus *Colparthrum*: in one, *Epicydes*, the antennæ have a very short third joint; and in *Othryades* (as in *Colparthrum*) the metasternal episterna have a narrow, deep, and well-defined groove along the inner and anterior margins, a character apparently of generic value in this family. *Stilpnonotus** (= *Calophthalmus*, Th.) is also here included in the Lagriidæ; this genus was referred by Thomson to Group III. of the "Ténébrionides vrais" of Lacordaire and stated to be allied to *Boros*†. It has, however, very strongly exserted and subcontiguous anterior coxæ, thus differing from the Tenebrionidæ; it agrees, in fact, in this respect with the Old-World genus *Lagria*, though possessing a very different facies. In *Stilpnonotus*, as in the other genera here included in this family, the anterior coxal cavities are closed behind.

The genera represented in our fauna may be tabulated thus:—

Anterior coxæ moderately exserted, not contiguous, the prosternum raised between them; epistoma separated from the front by a deep groove; antennary orbits prominent.
- Antennæ not gradually thickening from the base to the apex; the apical joint long, or at least as long as joints 9 and 10 united.
  - Apical joint of the labial palpi narrow and ovate; mandibles simply unidentate or feebly bifid at the apex.
    - Intermediate joints of the antennæ normal . . . . . *Statira.*
    - Intermediate joints of the antennæ flattened, 6 and 7 the widest. *Uroplatopsis.* – 53

* In Gemminger and Harold's Catalogue, vii. p. 1999, this generic name is erroneously sunk as a synonym of *Eurypus*, Kirby; the latter has the anterior coxal cavities widely open behind.

† In *Boros* (a genus included in the Pythidæ by Leconte and Horn) the anterior coxal cavities are also open behind.

Apical joint of the labial palpi broad—subsecuriform, triangular, or crescentiform.
Antennæ with the third joint very short, very much shorter than the fourth . . . . . *Epicydes.* – 60
Antennæ with the third joint about as long as the fourth.
Mandibles furnished at the apex with two teeth; metasternal episterna without a distinct groove along the inner and apical margins.
Apical joint of the labial palpi subsecuriform . . . *Sphragidophorus.* – 61
Apical joint of the labial palpi crescentiform . . . *Meniscophorus.* – 64
Mandibles furnished at the apex with three teeth; metasternal episterna with a deep and well-defined groove along the inner and anterior margins.
Antennæ normal; head with a transverse groove between the eyes; femora more or less clavate . *Colparthrum.* 66
Antennæ with exceedingly slender and elongate joints; head not transversely grooved between the eyes; femora not clavate . . . . . *Othryades.* – 72
Antennæ gradually thickening from the base to the apex; the apical joint very short, not much longer than the tenth . . . . . *Rhosaces.* – 73
Anterior coxæ very strongly exserted, subcontiguous; epistoma confounded with the front; antennary orbits not prominent . . . . . *Stilpnonotus.* – 73

Statira apparently replaces *Lagria* in the New World; and its species are still more fragile. The North-American genus *Arthromacra* and the Tropical-South-American genera *Emydodes*, *Barsenis*, and *Disema* are not represented within the limits of our fauna*. Two other genera from Tropical South America have been referred to the Lagriidæ: one of these, *Storthephora*, Mäkl., is congeneric with *Paratenetus*, Spin. (*cf.* Biol. Centr.-Amer., Col. iv. pt. 1, p. 238), a genus considered by recent authors to belong to the Group 'Heterotarsides' of the Tenebrionidæ, the author including in it two species of small size (one from Venezuela and one from Brazil)†; the other, *Acropachia*, Mäkl., doubtless belongs to the same group.

Very many Central-American species of Lagriidæ closely resemble those of widely separated families; one genus, *Uroplatopsis*, has quite the facies of certain genera of Hispidæ, and some of its species (all of which are apparently very rare) possess very remarkable sexual characters. So far as we have been able to ascertain, the secondary sexual organs of the male do not afford (except in some few species) good corroborative specific characters.

* During the past month two additional genera from South America have been described by Fairmaire (Compt. Rend. Ann. Soc. Ent. Belg. xxxiii. p. xlix): one of these, *Sipolisia*, agrees in many of its characters with *Disema*.

† These are closely allied to *P. denticulatus* (*cf.* Biol. Centr.-Am., Col. iv. pt. 1, p. 243, t. 10. fig. 26).

STATIRA.

Statira, Lepeletier de St.-Fargeau & Serville, Encycl. méthod. x. p. 479 (1825); Lacordaire, Gen. Col. v. p. 571.

Ninety-five species of this genus have been described, and probably almost as many again exist unnamed in collections. *Statira* is perhaps the most characteristic genus of Heteromera in Tropical America, and an immense number of species no doubt exist there, each limited area possessing numerous representatives. The genus ranges from the Middle United States to the Argentine Republic; but its members become much fewer in number northwards, six only being known from north of our northern boundary. From Central America we have now to record no less than eighty species, three or four only of which are at all widely distributed within this area; and one only of the total number is known to us from south of our region. Two species from the warmer parts of the Old World have also been referred to *Statira**. Some of the Central-American representatives bear a close resemblance to various forms of Carabidæ inhabiting the same districts, notably to certain species of *Agra*, *Colpodes*, *Calleida*, *Euproctus*, *Dromius*, and *Leptotrachelus*; others from Tropical South America resemble *Casnonia*. Mäklin is the only author who appears to have paid very much attention to the Tropical-American *Statiræ*; but he appears to have chiefly confined himself to the species of Brazil, Colombia †, and Mexico, most of those catalogued from these countries having been described (and some of those of the older authors redescribed) by him. It must be remarked that in numerous cases this author has, probably from insufficiency of material, placed far too much importance upon colour as a specific character; and in the descriptions of three of his Mexican species (two of which, *S. decorata* and *S. cyanipennis*, are here referred to other genera) no mention whatever is made of their more important structural characters, though the colour is given at great length. Examples found under bark, often not fully mature, are sometimes, as might be expected, lighter in colour than those found upon herbage; and wholly castaneous or testaceous forms occur of several of the metallic æneous species, as *S. glabrata*, *S. ærata*, &c. Other species, *S. inconstans*, *S. irregularis*, *S. nigripennis*, &c., are also very inconstant in colour, these having the elytra striped or spotted in some examples and unicolorous in others. All the species here included in *Statira* agree in having (so far as can be ascertained from an external examination in some cases, as regards the mouth-parts) the apical joint of the labial palpi narrow and ovate; the mandibles simply unidentate or feebly bifid; the outer lobe of the maxillæ comparatively narrow; the anterior coxæ moderately exserted and not contiguous, the prosternum narrowly raised between them, usually to the level of the coxæ (thus differing from *Lagria*, *Emydodes*, *Arthromacra*, and, probably, *Eutrapela* also); the femora gradually widening from the

* One of these, *S. rufobrunnea*, Mars., from Japan, does not belong to this genus as here understood.

† Our numerous species from the State of Panama cannot be identified with either of these.

base; the elytra without opaque lateral patch; and the head more or less narrowed or constricted behind into a neck. The eyes vary considerably in size in the different species, but the head is usually narrowly extended on each side behind them. The apical joint of the antennæ in some species is very long, often exceedingly elongate in the male; but in others (*S. glabrata*, *S. irregularis*, &c.) it is only about as long as joints 8–10 or 9 and 10 united, and not longer in the male than in the female. The presence or absence of a complete lateral carina to the thorax, the clothing or armature of the femora and tibiæ, and the sulcation of the latter (recently noticed by Dr. Horn), are characters of great assistance in discriminating the numerous species: none of these points of difference are noticed by Mäklin. The armature of the anterior femora and tibiæ in the species here placed at the beginning of the genus, it may be noted, is not a male character, but is shared equally by the female. The spurs of the tibiæ, though short, are quite distinct in many of the species, while they are indistinct in others.

A few species of small size, *S. irregularis* &c., have the thorax transversely convex and short, the apical joint of the antennæ comparatively short in both sexes, and the prosternum exceedingly narrow and raised nearly to the level of the anterior coxæ; they cannot, however, be satisfactorily separated from *Statira* *. The number and position of the setiferous impressions on the elytral interstices afford good specific characters. The sixth ventral segment is sometimes extruded and visible; but, like the elongate apical joint to the antennæ in the male, it is apparently of no value as a generic character in this family †. Most of the species obtained by myself were found upon herbage or under loose bark, or beaten from the decaying branches of fallen trees. The earlier stages are probably passed in rotten wood or in decaying vegetable matter.

The following table will assist in the recognition of the Central-American species ‡; but it must be remarked that certain species which are otherwise closely allied are by this arrangement widely separated, e.g. *S. nigrosparsa* and *S. guatemalensis*:—

A. Tibiæ rounded and not sulcate on their outer edge.

a. Anterior femora denticulate and the anterior tibiæ toothed within in both sexes . . . . . Species 1, 2.

b. Anterior femora unidentate and the anterior tibiæ unarmed within in both sexes . . . . . Species 3.

c. Anterior femora ciliate and the anterior tibiæ toothed within in both sexes . . . . . Species 4, 5.

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* South-American species differing thus from *Statira* are noted by Lacordaire (Gen. Col. v. p. 572, nota).

† Leconte and Horn (Class. Col. N. Am. 1883, p. 393) state that the 'Statirini' are distinguishable by these characters from the genuine 'Lagriini'; but this is a mistake. The former, however, may be known from the latter by the prosternum being raised between the anterior coxæ; *Arthromacra* agrees with the 'Lagriini' in having the prosternum depressed or not raised between the anterior coxæ.

‡ *S. tristis*, Mäkl., is unknown to me, and owing to the imperfect description it cannot be included in the table; it is accordingly placed at the end of the genus.

d. Anterior femora sparsely ciliate from the base nearly to the apex and the anterior tibiæ unarmed within in both sexes . . . . . Species 6–8.

e. Anterior femora glabrous and the anterior tibiæ unarmed within in both sexes.

a^1. Femora and tibiæ (the inner side or apices of the latter excepted) smooth and glabrous, or, at most, punctured and slightly pubescent*.

a^2. Upper surface varying in colour—in some species entirely (or with the elytra only) æneous, or with æneous lustre; in others, piceous, castaneous, or testaceous; in others, the prothorax reddish or testaceous, with the elytra darker (in one species cæruleous); size variable.

a^3. Prothorax with the sides completely immarginate, or, at most, margined at the base or apex.

a^4. Elytra with rows of large flattened tubercular elevations. Species 9.

b^4. Elytral interstices 1, 7, 9 with one and 3 and 5 with two rows of somewhat closely placed setiferous impressions, the intervals between them at the sides and apex raised; size very large . . . . . Species 10.

c^4. Elytral interstices 1, 3, 5, 7, 9 each with a row of setiferous impressions; size small . . . . . Species 11, 12.

d^4. Elytral interstices 3 and 5 with numerous, and 1, 7, 9 with a few, setiferous impressions; size moderate; elytra dull blue . . . . . Species 13.

e^4. Elytral interstices 1, 3, 5, 7, 9 each with a few setiferous impressions (sometimes obsolete on 1); size small . Species 14–16.

f^4. Elytral interstices 3, 5, 7, 9 (sometimes obsolete or partly so on 5 or 7) each with widely scattered setiferous impressions; size moderate or small . . Species 17–26.

g^4. Elytral interstices 3 and 9 each with two or three setiferous impressions only at the apex; size small . . Species 27.

b^3. Prothorax with the sides margined from the base to the apex.

h^4. Elytral interstices 1, 3, 5, 7, 9 (sometimes one only on 7, at the shoulder) each with a few setiferous impressions, and not raised (except in *S. mexicana*, at the apex); posterior tibiæ in the male simple . Species 28–38.

i^4. Elytral interstices 1, 3, 5, 7, 9 each with numerous setiferous impressions, and not raised; posterior tibiæ in the male with a small brush . . . . . Species 39.

j^4. Elytral interstices 1, 3, 5, 7, 9 each with a row of rather closely placed deep setiferous impressions . Species 40.

k^4. Elytral interstices 1, 3, 5, 7, 9 each with moderately numerous setiferous impressions, the impressions from the middle to the apex preceded by a small conical elevation; anterior angles of the prothorax obtuse . Species 41.

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* In *S. alternans* the legs are clothed with rather longer hairs.

f^4. Elytral interstices 1, 3, 5, 7, 9 each with a row of closely placed setiferous impressions, the impressions (except at the base) preceded by a conical or tubercular elevation; anterior angles of the prothorax very prominent . . . . . Species 42, 43.

b^2. Upper surface more or less testaceous, the elytra (at least in the typical form) with distinct markings; prothorax not, or, at most, obsoletely margined at the sides; size small . Species 44–51.

b^1. Femora smooth, the tibiæ clothed with long hairs; prothorax with the sides immarginate; elytra with the fifth interstice broad, costate, and pallid in colour . . . . . Species 52.

c^1. Femora and tibiæ (except in *S. bicolor*) on all sides clothed with long or moderately long hairs.

c^2. Prothorax with the sides immarginate, or obsoletely margined at the base, about as long as or longer than broad, the surface (except in *S. microps*) with some coarse punctures.

c^3. Elytral interstices thickly and confusedly punctured; prothorax coarsely punctured . . . . . Species 53–56.

d^3. Elytral interstices each with a row of closely placed setiferous impressions . . . . . Species 57–61.

e^3. Elytral interstices 1, 3, 5, 7, 9 each with a row of closely placed setiferous impressions . . . . . Species 62–65.

d^2. Prothorax with the sides immarginate, or obsoletely margined at the base, short, transversely convex, and smooth; elytra in some species spotted or striped; size small.

f^3. Elytral interstices each with a very irregular row of setiferous impressions; apical joint of the antennæ comparatively short in both sexes, not much (if at all) longer in the male . . . . . Species 66–69.

g^3. Elytral interstices 1, 3, 5, 7, 9 each with a row of fine setiferous impressions; apical joint of the antennæ elongate in both sexes, still longer in the male . . . . . Species 70.

B. Tibiæ shallowly sulcate (at least towards the apex) on their outer edge; femora and tibiæ sparsely pubescent.

f. Prothorax with the sides margined from the base to the apex; elytral interstices 1, 3, 5, 7, 9 each with setiferous impressions . . . . Species 71, 72.

g. Prothorax with the sides obsoletely margined at the base; elytral interstices 1, 3, 5, 7, 9 each with a row of closely placed setiferous impressions, the impressions each preceded by a distinct elevation . . . Species 73.

C. Tibiæ sulcate on their outer edge from the base to the apex; femora and tibiæ hairy.

h. Prothorax with the sides finely or obsoletely margined from the base to the apex.

d^1. Elytral interstices each with a row of closely placed setiferous impressions . . . . . Species 74.

*e*¹. Elytral interstices 1, 3, 5, 7, 9 each with a row of closely placed setiferous impressions . . . . . Species 75–78.

i. Prothorax obsoletely margined at the base and apex only; elytral interstices 1, 3, 5, 7, 9 each with a row of setiferous impressions . . . Species 79.

1. **Statira glabrata.** (Tab. I. fig. 1, ♂.)

Statira glabrata, Mäkl. Act. Soc. Fenn. vii. p. 587 [1].

Hab. Mexico [1], Cordova, Yolos (*Sallé*), Jalapa, Chilpancingo (*Höge, H. H. Smith*); British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Capetillo, San Gerónimo (*Champion*).

Var. α. Elytra bluish-green, the interstices feebly convex.

Hab. Mexico, Chilpancingo (*Höge*), Cuernavaca (*Sallé*); Guatemala, San Gerónimo (*Champion*).

Var. β. Entirely castaneous, the antennæ ferruginous, the legs testaceous.

Hab. Mexico, Presidio (*Forrer*). One example (♀).

This is one of the most remarkable species of *Statira* and distinguished from all others of the genus, except the following, by the shape of the anterior femora and tibiæ: the former are coarsely denticulate and furnished with long scattered hairs on their inner edge, and very stout, and the latter are much curved and armed on the inner side a little beyond the middle with a sharp triangular tooth; these characters are precisely similar in both sexes. In the typical form the elytral interstices are perfectly flat, but in the variety α (examples of which were collected in two localities with others of the type-form) they are feebly convex. The third and fifth elytral interstices have each about four or five moderately coarse scattered setiferous punctures, one or two of which are sometimes obsolete or irregularly placed; and the ninth, in rare examples, has one or two similar punctures towards the apex. The number of teeth on the anterior femora varies from ten to fifteen. The antennæ are similarly formed in both sexes, and are ferruginous, with the three basal joints piceous; and the apical joint is about as long as, or a little longer than, joints 8–10 together. The examples from British Honduras have the elytra brownish-piceous with a translucent æneous tinge, and the variety β is entirely castaneous. *S. glabrata* was captured in great abundance at Jalapa and Capetillo; more than 100 examples have been received.

2. **Statira denticulata.**

Elongate, æneous or greenish-æneous, the elytra sometimes cupreous in tint at the sides and apex, shining. Head with a few exceedingly minute scattered punctures; eyes moderately large; antennæ moderately long, and similar in both sexes, piceous or piceo-ferruginous, the apical joint longer than joints 8–10 united; prothorax longer than broad, the sides much rounded anteriorly, strongly constricted behind, and obsoletely margined at the extreme base, the hind angles sharp and prominent, the base strongly margined and the margin raised, the surface sparsely and minutely punctured; elytra with shallow intrahumeral

depression, moderately long, widest a little behind the middle, parallel anteriorly, shallowly and regularly punctate-striate, the punctures fine and closely placed, the interstices flat, the third and fifth each with seven or eight, the seventh with three or four (one near the base, the others near the apex), and the ninth with five (widely separated), coarse setiferous punctures, the apices obtuse; beneath blackish-piceous, almost smooth, and very shining; legs piceous, the tarsi lighter; anterior femora coarsely denticulate (the teeth six or eight in number) and furnished with long scattered hairs on their inner edge, and very stout, and the anterior tibiæ curved and armed on the inner side beyond the middle with a short triangular tooth, in both sexes.

Length 10–10½ millim.; breadth (at shoulders) 2⅞ millim. (♂ ♀.)

Hab. Panama, Bugaba, Caldera, David (*Champion*).

Numerous examples. This species is very closely allied to *S. glabrata*, but easily distinguished by the seventh elytral interstice also having setiferous punctures, and the ninth (instead of having two or three at the apex) five widely separated punctures; the teeth on the anterior femora are fewer in number; and the antennæ are darker and have a comparatively longer apical joint. Towards the apex of the elytra the setiferous punctures are, as usual, coarser and closer, but on the ninth interstice they are coarse throughout and almost equidistant.

3. **Statira unidentata.** (Tab. I. fig. 2, ♂.)

Closely resembling *S. glabrata* and *S. denticulata* and differing as follows:—The anterior tibiæ unarmed within and a little curved, and the anterior femora with a broad triangular tooth on the inner side a little beyond the middle, in both sexes; the antennæ similarly formed in both sexes, ferruginous, the basal joint usually darker, the apical joint rather longer than joints 8–10 united; the elytra a little depressed on the disc, the surface of a unicolorous greenish-æneous tint, the third and fifth interstices each with about seven, the seventh with three or four (one near the base, the rest near the apex), and the ninth with about four (between the middle and the apex), moderately coarse setiferous punctures, the apices obtuse; the legs ferruginous, the femora and tibiæ usually more or less piceous.

Length 10–11 millim.; breadth (at shoulders) 2⅞–3 millim. (♂ ♀.)

Hab. Mexico, Playa Vicente (*Sallé*), Tapachula in Chiapas (*Höge*); British Honduras, R. Hondo (*Blancaneaux*); Guatemala, San Gerónimo (*Champion*).

Eight examples. Though very closely resembling *S. glabrata* and *S. denticulata* in its general facies, this insect can be identified at once by the structure of the anterior legs. As in both these species, the sides of the thorax are obsoletely margined at the extreme base.

4. **Statira interrupta.** (Tab. I. fig. 3, ♂.)

Elongate, æneous or greenish-æneous, very shining; the elytra towards the base more or less golden in tint and laterally (especially towards the apex) with bright cupreous reflections, entirely greenish-æneous, or (very rarely) greenish-violaceous. Head almost smooth; eyes large; antennæ moderately long and joints 3–10 rather elongate in both sexes, fusco-ferruginous, the three basal joints piceous—the apical joint in the male about or nearly as long as joints 8–10 united, in the female a little shorter (about three times as long as 10); prothorax rather longer than broad, the sides much rounded anteriorly, strongly constricted behind, and very finely margined at the extreme base, the hind angles sharp and prominent, the base strongly margined and the margin raised, the surface sparsely and minutely punctured; scutellum piceous; elytra with shallow intrahumeral depression, long, widest about the middle, parallel towards the base, shallowly and regularly punctate-striate, the punctures fine and closely placed, the interstices flat, the

third, fifth, and seventh each with about nine, and the ninth with about five, coarse setiferous punctures, and the spaces between the punctures towards the apex longitudinally raised or costate. the first interstice also with two or three finer setiferous punctures near the apex, the apices obtuse; beneath blackish-piceous, very shining, almost smooth; legs piceous, the tarsi lighter, comparatively stout; anterior femora on their inner edge clothed with long hairs, and the anterior tibiæ armed with a sharp triangular tooth on the inner side some distance beyond the middle, the space between the tooth and the apex densely clothed with fulvous hair, in both sexes.

Length 12½–13 millim.; breadth (at shoulders) 3½ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt*); PANAMA, Bugaba 1000 feet (*Champion*).

Var. α. Legs and antennæ (the two or three basal joints excepted) reddish-testaceous.

Hab. NICARAGUA, Chontales (*Belt*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Var. β. The elytra reddish-castaneous, the base (sometimes very narrowly, sometimes to beyond the middle) æneous or greenish-æneous; the legs and antennæ varying in colour, the former from piceous to reddish-testaceous, the latter from fusco-ferruginous to reddish-testaceous.

Hab. PANAMA, Bugaba, Volcan de Chiriqui, San Feliz, Tolé (*Champion*).

Var. γ. The prothorax more closely and more distinctly punctured; the elytra brownish-piceous, with a translucent æneous tinge, the setiferous punctures on the third interstice fewer in number.

Hab. GUATEMALA, Panima in Vera Paz (*Champion*). A single male example.

Three of the forms were collected by myself in plenty in Chiriqui; from Nicaragua eight examples have been received, three of the typical form, and five of the variety α. *S. interrupta* is probably an ally of the Colombian *S. hilaris*, Mäkl. (to judge from the description), it having towards the apex the spaces between the setiferous punctures on the third, fifth, seventh, and ninth interstices of the elytra longitudinally raised; the present insect is, however, larger, and has the thorax and elytral striæ differently punctured. Other allied species inhabit Tropical South America.

5. **Statira chiriquina.** (Tab. I. fig. 4, ♂.)

Elongate, æneous or greenish-æneous, very shining, the elytra sometimes entirely and sometimes laterally and towards the apex of a more cupreous tint. Head almost smooth; eyes large; antennæ moderately long and joints 3–10 rather elongate in both sexes, piceous or piceo-ferruginous, the three basal joints darker—the apical joint in the male rather longer than, in the female about equal to, joints 8–10 united; prothorax about as long as broad, the sides much rounded anteriorly, strongly constricted behind, and obsoletely margined at the extreme base, the hind angles sharp and prominent, the base broadly margined and the margin raised, the surface sparsely and very minutely punctured; elytra with shallow intrahumeral depression, moderately long, widest a little beyond the middle, parallel towards the base, very finely and shallowly punctate-striate, the punctures closely placed though a little more scattered towards the apex, the interstices perfectly flat throughout, the third and fifth each with five or six, the seventh with two or three (one near the base and one or two near the apex), and the ninth with about three (towards the apex), deep and coarse setiferous punctures, the first very deeply impressed within the sutural angles, the latter obtuse; beneath blackish-piceous, very shining, almost smooth; legs æneo-piceous, the tarsi rather lighter; anterior femora on their inner edge clothed with long scattered hairs, and the anterior tibiæ armed with a short triangular tooth on the inner side beyond the middle, the space between the tooth and the apex densely clothed with fulvous hair, in both sexes.

Length 11–12½ millim.; breadth (at shoulders) 3⅓–3½ millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Many specimens of this insect were captured by myself on the forest-clad slope of the Volcan de Chiriqui. *S. chiriquina* closely resembles *S. glabrata* in general facies; but it is considerably larger, and, as well as having very differently-formed anterior femora and tibiæ, has the setiferous punctures on the elytra much coarser and deeper, and also present on the seventh interstice; the antennæ are not so stout, and the apical joint in the male is comparatively much longer.

6. Statira scitula.

Elongate, varying in colour from dark piceous-brown to reddish-castaneous, the elytra varying from æneous to reddish-castaneous with a translucent æneous tinge, sometimes slightly cupreous at the sides towards the apex, shining. Head very distinctly and rather coarsely punctured between the eyes and posteriorly; eyes moderately large, smaller in the female; antennæ more or less ferruginous, the three basal joints darker—the apical joint in the male nearly as long as joints 6–10, in the female rather longer than 8–10, united; prothorax longer than broad, strongly constricted at the sides behind, the latter immarginate or obsoletely margined towards the base, the hind angles sharp and prominent, the basal margin raised and deeply grooved within, the surface finely and sparsely (sometimes more closely) punctured; elytra with shallow or rather deep intrahumeral depression, moderately long, widest about the middle, parallel towards the base, finely and lightly punctate-striate, the punctures closely placed, the interstices quite flat, the third with about five (widely scattered between the base and apex), and the ninth with one or two (near the apex), shallow setiferous punctures, the apices obtuse; legs varying in colour from piceous to reddish-testaceous, moderately stout, the tibiæ clothed with long hairs within; anterior femora furnished with long scattered hairs on their inner edge in both sexes.

Length $7\frac{1}{2}$–8 millim.; breadth (at shoulders) 2–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*); Guatemala, San Gerónimo, Aceytuno (*Champion*).

Four male and three female examples.

Var.? The elytra relatively longer, the rest as in the type. Length $8\frac{1}{2}$–9 millim. (♀.)

Hab. Mexico, Jalapa (*M. Trujillo*); Guatemala, Capetillo (*Champion*). Three examples.

Like *S. tropicalis*, this is a perplexing and variable species; and it is only distinguishable from that insect by the more finely punctured elytral striæ and flatter interstices. *S. scitula* is perhaps a variety of *S. tropicalis*, but the difference in the elytral sculpture (which seems to be constant) prevents me from treating it as such; in one of the male examples the eyes are smaller and the apical joint of the antennæ is rather shorter than in the others.

The variety (in the absence of the male sex) is doubtfully referred to the same species.

7. Statira tropicalis.

Elongate, piceo- or reddish-castaneous, the elytra with the sides entirely or from the base to about the middle and the base (usually) greenish-æneous or golden-green, sometimes entirely greenish-æneous or æneous, shining. Head rather coarsely punctured at the sides between the eyes and posteriorly; eyes moderately large, distinctly smaller in the female; antennæ rather stout, moderately long, varying in colour from ferruginous to piceous—the apical joint in the male as long as joints 6–10 united (7–10 decreasing in

length outwardly, 10 as broad as long), in the female much shorter, and not equalling 7–10 united (these about equal in length); prothorax long, subcylindrical, rather strongly constricted at the sides behind, the latter immarginate, the hind angles moderately prominent, the basal margin raised and rather deeply grooved within, the surface sparsely (sometimes a little more closely) and quite finely punctured; elytra with long and deep intrahumeral depression, comparatively rather short, widest about the middle, parallel towards the base, rather coarsely punctate-striate, the punctures not very closely placed, the interstices flat (often a little convex on the apical half or two-thirds of the disc), the third with five (widely separated, deep, and transverse), and the ninth with two or three (towards the apex), setiferous punctures, the apices obtuse; legs moderately stout, varying in colour from ferruginous to piceous; anterior femora with a few long hairs on their inner edge in both sexes.

Length $7\frac{1}{2}$–$7\frac{3}{4}$ millim.; breadth (at shoulders) 2–$2\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*); British Honduras, Belize, R. Hondo (*Blancaneaux*); Guatemala, Las Mercedes (*Champion*); Nicaragua, Chontales (*Belt*).

One male and six female examples. *S. tropicalis* is very variable in colour, and closely resembles *S. variabilis*. The example from Las Mercedes has the elytra of a unicolorous greenish-æneous tint, while two of those from British Honduras have only the sides of the elytra of that colour; the two specimens from Nicaragua are totally different in colour, but agree well enough in other respects.

8. **Statira variabilis.** (Tab. I. figg. 5, ♂; 6, ♂ var.)

Elongate, subparallel, blackish-æneous, the elytra of an æneous, greenish-æneous, or cupreo-æneous tint and with the lateral margins usually suffused with cupreous towards the apex, very shining. Head coarsely and irregularly punctured at the sides between the eyes and posteriorly, the eyes moderately large, the palpi black; antennæ rather stout (especially in the female), piceous, or piceo-ferruginous with the basal joints darker—the apical joint in the male as long as joints 5–10 united (these latter gradually decreasing in length outwardly, 9 as long as broad, 10 subtransverse), in the female very much shorter, scarcely equalling joints 8–10 united (5–10 more elongate and subequal); prothorax longer than broad, subcylindrical, the sides immarginate and rather strongly constricted behind, the hind angles sharp, the base shallowly grooved within, the surface sparsely and very finely punctured; scutellum brownish-piceous; elytra with long and deep intrahumeral depression, moderately long, subparallel, finely and shallowly punctate-striate, the punctures rather closely placed, the interstices flat throughout, the third with four or five widely separated deep setiferous punctures and the ninth with one or two shallower ones at the apex, the apices obtuse; beneath blackish-piceous, very shining; legs rather slender, piceous; anterior femora with long scattered hairs on their inner edge in both sexes.

Length 6–$9\frac{1}{2}$ millim.; breadth 2–$2\frac{3}{4}$ millim. (♂ ♀.)

Hab. Guatemala, Sinanja and Chacoj in Vera Paz (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

Five examples.

Var. Reddish-castaneous; the elytra brilliant golden-green, with a large common reddish-castaneous patch behind the middle extending nearly to the apex; legs and antennæ reddish or ferruginous; the apical joint of the antennæ in the male nearly equalling joints 4–10 united. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui (*Champion*). Two examples.

This is one of several very closely allied species inhabiting Central America; it is

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chiefly distinguished from *S. scitula* and *S. tropicalis* by the still more elongate apical joint of the antennæ in the male. All three species have the head somewhat coarsely punctured.

The variety, at first sight, appears to be quite distinct, but, in reality, only differs in colour. *S. variabilis* varies considerably in size.

9. **Statira agræformis.** (Tab. I. fig. 7, ♂.)

Very elongate, brownish-piceous, the elytra darker and of a blackish-bronze tint, moderately shining. Head with a few minute scattered punctures, shallowly impressed in the middle between the eyes, the latter very large; antennæ long, moderately stout, fusco-ferruginous, the apical joint in the male about as long as joints 6–10 united, the latter gradually decreasing in length outwardly; prothorax much longer than broad, the sides obsoletely margined at the extreme base and very distinctly so in front, a little rounded about the middle, distinctly narrowing anteriorly, and strongly constricted behind, the hind angles sharp and prominent, the base strongly margined and the margin raised, the disc transversely and rather broadly depressed in the middle before the base and apex and somewhat thickly punctured, the sides more sparsely so and with a deep oblique fovea behind and a much shallower one before the middle; elytra with indistinct intrahumeral depression, long, widest behind the middle, parallel towards the base, with regular rows of large and rather broad oblong or elongate smooth tubercles from the base to the apex, the tubercles flattened on the disc, and a little more elevated towards the sides and apex—each surrounded by a line of rather coarse punctures, and those at the apex followed by a long erect bristle, the apices rather sharply mucronate; beneath very shining, smooth, dark brownish-piceous; legs rather long and slender, reddish-testaceous.

Length 13⅔ millim.; breadth (at shoulders) 3½ millim. (♂.)

Hab. Panama, Bugaba 1000 feet (*Champion*).

This insect is perhaps nearest allied to the Brazilian *S. gemmifer*, Mäkl., of described species, but others from the Amazons approach it more closely. *S. agræformis* very much resembles various *Agræ* inhabiting the same district. The elytra exhibit a beautifully catenulate sculpture; the tubercles are broader than in any of the Amazonian species I have yet seen.

10. **Statira ingens.** (Tab. I. fig. 8, ♂.)

Elongate, broad, blackish-æneous or æneous, the elytra of a more brassy tint, very shining. Head smooth, longitudinally grooved between the eyes, the latter moderately large; antennæ stout, piceous-black—the apical joint in the male (in the female broken off) equalling joints 7–10 united (these decreasing in length outwardly, 10 a little longer than broad); prothorax about as long as broad, the sides completely immarginate, very strongly rounded anteriorly, and very abruptly and deeply constricted behind, the hind angles sharp and prominent, the disc (in one example) shallowly canaliculate before the middle, the basal margin raised and rather deeply grooved within (especially at the sides), the surface impunctate; elytra with very shallow intrahumeral depression, long and broad, parallel to beyond the middle, finely and deeply punctate-striate, the punctures approximate, the striæ here and there a little sinuous, the interstices feebly convex, the first, seventh, and ninth with one and the third and fifth with two (towards the apex merging into one) irregular rows of somewhat closely placed moderately coarse setiferous punctures, the intervals between the punctures laterally and towards the apex strongly raised and forming oblong tubercles, the apices submucronate; beneath blackish-æneous, shining, smooth, the ventral segments with from 4–8 setiferous punctures on each side; legs stout, piceous.

Length 20–23 millim.; breadth 6–7 millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Belt*); Panama, Obispo (*Salvin*).

Two examples. This species is no doubt allied to the Colombian *S. steinheili*, Mäkl.; but its very much larger size, different colour, and shorter and broader thorax abundantly distinguish it. *S. ingens* is much larger and broader than any other known species of the genus. The setiferous impressions on the third and fifth elytral interstices form two irregular rows from the base to considerably beyond the middle.

11. **Statira melanocephala.** (Tab. I. fig. 9, ♂.)

Statira melanocephala, Mäkl. Act. Soc. Fenn. vii. p. 593[1].
Statyra melanocephala, Chevr. Dej. Cat. 3rd edit. p. 236[2].

Hab. Mexico [1 2], Jalapa (*Höge*).

Var. Larger and more elongate; the elytra relatively longer, piceous-brown, the base fulvo-testaceous and the suture lighter, the setiferous impressions on the alternate interstices coarser and deeper. Length $9\frac{1}{3}$ millim.

Hab. Mexico, Jalapa (*Höge*).

This species was described from two broken examples, one with the head black and the other with the head reddish-testaceous. *S. melanocephala* is a small shining reddish-testaceous species, with the head, antennæ, and knees black or piceous, and the alternate elytral interstices with numerous setiferous impressions scattered between the base and apex. The head and thorax are almost smooth, having, at most, only very minute widely scattered punctures; the latter is finely margined at the sides at the base and almost smooth; and the apical joint of the antennæ in the male is equal to four, and in the female to rather less than three, of the preceding joints united. Numerous examples were captured by Herr Höge; none of these have the head red. The variety, of which a single female example only has been received, merely differs in the colour of the elytra and in being larger and more elongate.

12. **Statira collaris.** (Tab. I. fig. 10, ♂.)

Elongate, narrow, shining, above and beneath black or piceous, the prothorax (and sometimes the head also) red or reddish-testaceous. Head with some very minute punctures between the eyes, for the rest smooth, the eyes small; antennæ black or piceous—the apical joint in the male not so long as joints 8–10 united (the latter elongate), a little shorter in the female; prothorax convex, about as long as broad, the sides immarginate, rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin sharply raised and grooved within, the surface smooth; elytra with shallow intrahumeral depression, long, widest beyond the middle, very finely and very shallowly punctate-striate, the interstices flat, the first, third, fifth, seventh, and ninth each with a row of closely placed fine setiferous punctures which extend from the base to the apex, the punctures each preceded by an indistinct elevation, the apices slightly pointed; legs black or piceous.

Length 7–$8\frac{1}{2}$ millim.; breadth $1\frac{1}{2}$–2 millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*).

Five examples. In colour this species resembles *S. angustula*, from which it differs in its more shining surface, less parallel shape, and very differently sculptured elytra.

From *S. melanocephala*, apart from the difference in colour, it may be separated by the very much more finely and shallowly punctured elytral striæ and by the setiferous impressions being each preceded by a sort of feeble elevation, and also by the much shorter apical joint of the antennæ in the male.

13. **Statira cæruleipennis.** (Tab. I. fig. 11, ♂.)

Moderately elongate, rather broad, subopaque, reddish-testaceous; the elytra dull blue, the suture indeterminately and the epipleuræ reddish-brown. Head finely and thickly punctured, the eyes moderately large; antennæ ferruginous, stout, comparatively short, the apical joint (♂) about as long as joints 6–10 united; prothorax large and broad, transverse, a little flattened on the disc, the sides finely margined at the extreme base only, moderately rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin moderately raised, the surface densely and very minutely punctured; elytra with very shallow intrahumeral depression, moderately long, very deeply striate throughout, the striæ with closely packed fine transverse impressions, the interstices rather convex, strongly so towards the apex, the first with three (one at the base, the others at the apex), the third with about eleven and the fifth with seven (scattered between the base and apex), the seventh with two or three (one at the shoulder, the others at the apex), and the ninth with five or six (near the apex), fine setiferous punctures, the apices obtuse; beneath obscure castaneous, very shining; legs rather stout, reddish-testaceous.

Length 10½ millim.; breadth 3 millim. (♂.)

Hab. Mexico, Taretan (*Höge*).

One male example. This comparative broad species is not very closely allied to any other noticed here; it approaches *S. multiformis*. The elytra are dull blue, and the rest of the insect in great part reddish-testaceous. The tibiæ are not grooved on their outer edge. The almost immarginate sides of the thorax and other particulars separate it from *S. mexicana* and its allies. *S. cæruleipennis* is broader and more robust than any other of the Central-American species with bluish elytra.

14. **Statira limbata.** (Tab. I. fig. 12, ♂.)

Elongate, subopaque, reddish-testaceous; the elytra usually more or less marked with piceous at the sides, sometimes wholly piceous with the exception of the suture, sometimes entirely reddish-testaceous, and slightly shining. Head smooth or with very minute scattered punctures, sometimes foveate in the middle between the eyes, the latter small; antennæ varying from piceous to ferruginous, the intermediate joints distinctly widened towards their apex—the apical joint in the male about or scarcely equalling joints 8–10 united (the latter elongate), a little shorter in the female; prothorax about as long as broad, the sides completely immarginate, rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin moderately raised and at the sides deeply grooved within, the disc sometimes shallowly impressed in the middle behind, the surface smooth and opaque; elytra with shallow intrahumeral depression, moderately long, widest beyond the middle, finely and shallowly punctate-striate (the punctures sometimes transverse), the interstices flat or very feebly convex, the first with one (at the apex, sometimes obsolete), the third and fifth each with from four to six (widely scattered between the base and apex, the anterior ones sometimes obsolete), the seventh with one (at the shoulder, and, rarely, two or three near the apex), and the ninth with three or four (towards the apex), fine setiferous punctures, the apices obtuse; beneath (in all varieties) more or less testaceous; legs usually reddish-testaceous with the apical half or third of the femora (and sometimes the tibiæ and tarsi) piceous, sometimes wholly testaceous.

Length 5⅔–8 millim.; breadth 1½–2⅔ millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Vera Cruz, Cordova (*Sallé*), Atoyac (*H. H. Smith*),

Jalapa (*Höge*), Teapa in Tabasco (*Höge, H. H. Smith*), Temax in North Yucatan (*Gaumer*); British Honduras, R. Hondo (*Blancaneaux*).

A common species on the Atlantic slope of Central and Southern Mexico and also inhabiting British Honduras, but apparently not extending into Guatemala. *S. limbata* is closely allied to *S. vilis*, and is found in many of the same localities. It differs constantly from that species in its more elongate shape and less shining surface; the apical joint of the antennæ very much shorter in the male, and to a less degree in the female; and the head and thorax almost smooth, the latter opaque. In none of the varieties of *S. vilis* are the elytra coloured as in the normal form of *S. limbata*, *i. e.* having the sides rather narrowly piceous. The under surface in *S. limbata* is always more or less testaceous, while in the dark forms of *S. vilis* it is piceous. The duller upper surface, differently-formed antennæ, smooth thorax, and very few setiferous punctures on the elytra easily separate *S. limbata* from *S. melanocephala*.

15. **Statira angustula.**

Elongate, narrow, subparallel, depressed, opaque, above and beneath black, the head and prothorax red or reddish-testaceous, the former sometimes a little darker. Head almost smooth, or with scattered very minute punctures; the eyes small, black; antennæ rather slender, piceous—the apical joint in the male rather longer, in the female less, than joints 8–10 united; prothorax about as long as broad (sometimes a little shorter), the sides obsoletely margined at the extreme base only, rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin moderately raised and at the sides grooved within, the disc shallowly depressed in the middle behind, the surface smooth; elytra with long and rather shallow intrahumeral depression, long, subparallel, finely and rather deeply punctate-striate, the interstices flat but becoming a little convex towards the apex, the first with one or two (at the apex), the third with four or five and the fifth with two or three (between the middle and apex), the seventh with one (at the shoulder), and the ninth with three or four (near the apex), setiferous punctures, the apices obtuse; legs slender, piceous.

Length 7–7⅔ millim.; breadth 1½–1¾ millim. (♂ ♀.)

Hab. Guatemala, near the city 5000 feet (*Salvin*).

Five examples. Narrower, more parallel, and more depressed than *S. limbata*, from dark-coloured examples of which it may also be known by the elytra, legs, and under surface (except that of the head and prothorax) being entirely black or piceous. The antennæ are also more slender and have a rather longer apical joint, and the elytra are opaque.

16. **Statira suavis.**

Elongate, narrow, piceous-brown, subopaque. Head smooth, broadly and shallowly foveate between the eyes, the latter small; antennæ comparatively stout, rather long, ferruginous—the apical joint in the male not equalling joints 8–10 united; prothorax convex, about as long as or rather longer than broad, the sides immarginate (except at the extreme base and there only obsoletely so), moderately rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin moderately raised, the surface smooth; elytra with rather deep intrahumeral depression, very finely and shallowly punctate-striate, the interstices flat but becoming convex towards the apex, the first with from two to four (near the apex), the third with about eight and the fifth and seventh each with about four (scattered between the base and

apex), and the ninth with four or five (towards the apex), fine setiferous punctures, the apices obtuse; legs piceo-testaceous or testaceous.

Length $6\frac{1}{2}$ millim.; breadth $1\frac{2}{3}$ millim. (♂.)

Hab. Mexico, Ventanas in Durango (*Höge*).

Two examples. A small, narrow, unicolorous species, not very closely allied to any other known to me. It resembles *S. angustula* in size and shape; but the thorax is relatively longer, and the elytra have more finely punctured striæ, and more numerous setiferous impressions on the third, fifth, and seventh interstices.

17. **Statira metallica.** (Tab. I. fig. 13, ♂.)

Elongate, reddish-castaneous or brownish-piceous, shining, the elytra æneous or greenish-æneous and sometimes cupreous in tint at the sides towards the apex. Head rather sparsely and irregularly but quite distinctly (subrugulosely at the sides in one or two examples) punctured between the eyes and posteriorly, the latter large; antennæ moderately long and rather slender, ferruginous—the apical joint in the male very elongate, nearly equalling joints 6–10 united, in the female shorter and about equalling 7–10 united; prothorax rather longer than broad, the sides much rounded anteriorly, very strongly constricted behind, and obsoletely margined at the extreme base, the hind angles sharp and very prominent, the base broadly margined and the margin raised, the surface closely but exceedingly minutely punctured; elytra with shallow intrahumeral depression, long, widest behind the middle, subparallel towards the base, finely and shallowly punctate-striate, the punctures very closely placed, the interstices flat or very feebly convex, the third with five (all placed beyond the middle), the fifth with about six (scattered between the base and apex), the seventh sometimes with one (close to the apex), and the ninth with about three (towards the apex), moderately coarse setiferous punctures, and the first deeply impressed within the sutural angles, the latter obtuse; beneath brownish-piceous, very shining; legs piceous or ferruginous, rather slender.

Length $11\frac{1}{4}$–$12\frac{1}{4}$ millim.; breadth (at shoulders) $3\frac{1}{2}$ millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Belt*); Costa Rica, Irazu (*Rogers*).

Three female examples from Nicaragua and a male from Costa Rica.

Var. The seventh elytral interstice with three setiferous punctures near the apex; the antennæ fusco-ferruginous.

Hab. Panama, Bugaba (*Champion*). A single male example.

This species is chiefly distinguished amongst its allies by the distinctly and irregularly punctured head and the closely and very minutely punctured thorax. The simple anterior tibiæ and femora separate it from *S. glabrata* &c. The presence of a setiferous puncture on the seventh elytral interstice at the apex is a variable character, it being altogether obsolete in one example; the variety only differs from the type in having two additional punctures on the seventh interstice. The apical joint of the antennæ in the male is very elongate. The œdeagus of the male is of peculiar form:—the apical portion of the central sheath is spoon-shaped, and on either side of this, and just behind it, is a stout hook curved upwards; in *S. glabrata* the sheath is gradually narrowed to the end and unarmed, and the apical portion is much more elongate.

18. **Statira inconstans.** (Tab. I. fig. 14, ♀ var.)

Elongate, brownish-piceous, the elytra greenish-æneous, shining. Head sparsely and minutely punctured or

almost smooth, the eyes quite small and widely separated in both sexes, the space behind them rather broad; antennæ reddish, slender towards the base, thickening outwardly—the apical joint in the male almost the length of joints 6–10, in the female about as long as 8–10, united; prothorax longer than broad, the sides feebly margined towards the base, slightly arcuate anteriorly, and only moderately constricted behind, the hind angles acute, the basal margin moderately raised, and at the sides shallowly grooved within, the surface very shallowly, sparsely, and minutely punctured (the punctures sometimes more distinct) and without any trace of foveæ in either sex; elytra with long and rather shallow intrahumeral depression, moderately long, widening gradually from the base to beyond the middle, rather deeply striate throughout, the punctures of the striæ fine and close, the interstices feebly convex but becoming flatter towards the base, the third and fifth each with from six to eight (scattered between the base and apex), the seventh sometimes with one (at the shoulder), and the ninth with about six (chiefly towards the apex), moderately coarse setiferous punctures, the apices obtuse; beneath brownish-piceous, shining; legs rather slender, piceo-testaceous, the tarsi testaceous.

Length $6\frac{1}{3}$–$8\frac{2}{3}$ millim.; breadth (at shoulders) $1\frac{7}{8}$–$2\frac{1}{3}$ millim. (♂ ♀.)

Hab. GUATEMALA, Cubilguitz in Vera Paz (*Champion*); NICARAGUA, Chontales (*Belt*).

Var. The head and prothorax usually lighter in colour, the base and apex of the latter more or less reddish-testaceous; the elytra testaceous, with the sides for about two-thirds of their length, the base (narrowly), and a transverse band about the middle (connected with the lateral stripe and widening a little at the suture and laterally) more or less greenish-æneous, and a triangular common sutural patch (sometimes connected with the lateral stripe) midway between the transverse band and the apex piceo-æneous; legs testaceous, the apices of the posterior femora sometimes darker. (♂ ♀.)

Hab. GUATEMALA, Cubilguitz in Vera Paz (*Champion*).

The unicolorous form is taken as the type, of which we have one male from Nicaragua and two females from Guatemala; of the variety we have six examples.

The typical form of *S. inconstans* closely resembles *S. foveicollis*; it differs as follows:—The head and thorax are without æneous tinge; the latter has no trace of lateral fossa in either sex, and is only moderately constricted behind; the eyes are smaller; and the elytra are more deeply striate, and have from six to eight rather coarse setiferous impressions on both the third and the fifth interstices.

From *S. vilis* in all its varieties the more or less greenish-æneous elytra and invariably reddish-testaceous antennæ distinguish it at once.

Both forms were collected together at Cubilguitz.

19. **Statira viridicollis.** (Tab. I. fig. 15, ♂.)

Very elongate, rather depressed, greenish-æneous, the elytra of a more brassy tint, shining. Head sparsely and finely punctured, the eyes large; antennæ long and rather stout, fusco-ferruginous, the basal joint darker, the apical joint in the male as long as joints 6–10 united, these latter rather elongate, 10 very little shorter than 9; prothorax about as long as broad, a little flattened on the disc, the sides narrowly margined towards the base, moderately rounded anteriorly, strongly constricted behind, and with traces of an irregular transverse depression about the middle, the hind angles acute and very prominent, the basal margin moderately raised and shallowly (except in the middle) grooved within, the surface irregularly, rather closely, and not very finely punctured, a narrow longitudinal space on the middle of the disc almost impunctate; elytra with very shallow intrahumeral depression, very long, a little flattened on the disc, subparallel to about the middle, finely and deeply punctate-striate, the punctures closely placed, but more scattered towards the apex, the interstices feebly convex, the third with four (near the apex), the fifth

with two (near the apex), the seventh with two or three (one at the shoulder and one or two at the apex), and the ninth with three or four (near the apex), shallow setiferous punctures, the apices a little produced but not mucronate; beneath brownish-piceous, shining; legs rather long and slender, the tarsi comparatively broad, piceo-æneous, the tibiæ and tarsi fusco-ferruginous.

Length 11 millim.; breadth 3 millim. (♂.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

One male example only. This species is of about the size and shape of (though more parallel than) *S. veræpacis*, from which its shining head and thorax (the latter thickly punctured instead of smooth), much larger eyes, stouter and very differently formed antennæ, and broader and shorter tarsi abundantly distinguish it; from *S. æneipennis* it may be known by its very much longer antennæ and other characters mentioned above.

20. **Statira foveicollis.** (Tab. I. fig. 16, ♂.)

Elongate, rather narrow, varying in colour from piceo-æneous with a greenish or violaceous tinge (the elytra sometimes more brilliant) to light brown with an æneous lustre, shining. Head almost smooth, the oral organs piceous, the eyes large; antennæ rather slender, moderately long, testaceous or fusco-testaceous—the apical joint in the male a little longer than joints 6–9, in the female 8–10, united; prothorax rather longer than broad, the sides obsoletely margined at the extreme base, rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin moderately raised and at the sides deeply grooved within, the surface sparsely and minutely punctured—in the male with a deep oblique lateral fossa (opaque and punctured within) about the middle, the corresponding space in the female being shallowly or obsoletely impressed and furnished with coarse scattered punctures; elytra with long and deep intrahumeral depression, moderately long, widest a little beyond the middle, subparallel towards the base, a little flattened on the disc, finely, closely, and rather deeply punctate-striate throughout, the interstices flat but becoming a little more convex towards the apex, the third with four (one at the extreme base and three near the apex), the seventh with one (at the shoulder), and the ninth with two or three (near the apex), fine setiferous punctures, the apices obtuse; beneath varying in colour from fusco-testaceous to piceous-brown, shining; legs rather slender, piceous or piceo-testaceous.

Length $6\frac{1}{2}$–$7\frac{2}{3}$ millim.; breadth (at shoulders) $1\frac{3}{4}$–2 millim. (♂ ♀.)

Hab. British Honduras, R. Hondo (*Blancaneaux*); Nicaragua (*Sallé*), Chontales (*Belt*, *Janson*); Panama, Bugaba (*Champion*).

Numerous examples. A small narrow species, æneous above, with testaceous antennæ, very few setiferous punctures on the elytra, and very remarkable sexual characters. These latter consist of a large oblique fossa on each side of the thorax (precisely similar in the numerous examples examined) in the male, the corresponding space in the female being obsoletely and obliquely impressed and furnished with coarser punctures than the rest of the surface.

21. **Statira crassicornis.** (Tab. I. fig. 17, ♀.)

Moderately elongate, subparallel, depressed, blackish-æneous, the elytra of a more brassy tint, moderately shining. Head short and very broad, minutely and rather thickly punctured; eyes (♀) very large, narrowly separated; antennæ (♀) ferruginous, the five basal joints piceous, exceedingly stout, comparatively short, the apical joint longer than joints 9 and 10 united (but not equalling 8–10), 8–10 longer than broad and subequal; prothorax broad, very strongly transverse, the sides completely immarginate

(but sharply separated from the flanks), dilated and strongly rounded anteriorly, and abruptly constricted behind, the hind angles acute, the basal margin much raised and laterally very deeply grooved within, the disc flattened, the surface rather densely, irregularly, and very minutely punctured (the disc with numerous very fine irregular scratches), the sides smoother; elytra with long and rather deep intrahumeral depression, comparatively short, subparallel to beyond the middle, flattened on the disc, very finely and closely punctate-striate, the interstices flat, the third, fifth, and ninth each with about six (scattered between the base and apex and almost equidistant), and the seventh with one (at the shoulder), fine setiferous punctures, the apices obtuse; beneath piceous-brown, shining; legs short and stout, piceo-ferruginous, the femora darker towards the apex, the tarsi ferruginous.

Length $8\frac{3}{4}$ millim.; breadth $2\frac{1}{2}$ millim. (♀.)

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*, April 1888).

A single female example. *S. crassicornis* is not closely allied to any other known Central-American member of the genus, though it closely approaches one or two species from the Amazonian region. The very broad head, large eyes, strongly transverse thorax, stout limbs (the antennæ exceedingly stout), depressed and rather short form, and other characters mentioned above give *S. crassicornis* a facies quite distinct from any other species here enumerated.

22. **Statira isthmiaca.** (Tab. I. fig. 18.)

Moderately elongate, rather broad, depressed, blackish-æneous, the elytra of a unicolorous bright greenish-æneous tint, shining. Head shallowly longitudinally impressed between the eyes in the middle, almost smooth, the eyes small; antennæ rather short, slender, ferruginous but darker towards the base—the apical joint in the male fully as long as, in the female a little shorter than, joints 8–10 united; prothorax about as long as broad, the sides completely immarginate, strongly rounded anteriorly, and abruptly constricted behind, the hind angles prominent and rather acute, the basal margin much raised but scarcely grooved within, the surface with exceedingly minute widely scattered punctures; elytra with shallow intrahumeral depression, rather broad, comparatively short, widest beyond the middle, shallowly transversely impressed on the disc below the base, finely, closely, and rather deeply punctate-striate throughout, the interstices flat or feebly convex, the third with three (between the middle and apex, the anterior one sometimes obsolete), the fifth with two (one near the apex and one near the middle, the latter sometimes obsolete), the seventh with one (at the shoulder), and the ninth with three or four (near the apex), fine setiferous punctures, the apices a little produced but obtuse; beneath piceous-brown, shining; legs slender, piceous, the tarsi lighter.

Length 9–$9\frac{1}{2}$ millim.; breadth (at the shoulders) $2\frac{1}{3}$–$2\frac{2}{3}$ millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

One male and two female examples. The unicolorous and transversely impressed elytra, fine setiferous punctures, almost smooth head and thorax (the latter immarginate), and shorter and more slender antennæ distinguish this species in a moment from *S. ignita*, to which it is in other respects nearly allied.

23. **Statira multiformis.** (Tab. I. fig. 19, ♂.)

Moderately elongate, shining, varying in colour from black or piceous to reddish-testaceous, the elytra with the shoulders or about the basal third piceo- or greenish-æneous. Head with minute scattered punctures, the eyes moderately large; antennæ piceo-ferruginous or ferruginous—the apical joint in the male equal to five (sometimes to nearly six and sometimes only to a little more than four), and in the female to nearly four, of the preceding joints united; prothorax convex, about as long as broad, the sides obsoletely

margined towards the base only, rounded anteriorly, and strongly constricted behind, the hind angles moderately prominent, the basal margin raised and at the sides rather deeply grooved within, the surface closely and very minutely punctured; elytra with shallow or rather deep intrahumeral depression, moderately long, very finely punctate-striate, the punctures quite shallow, transverse, and approximate, the interstices flat or feebly convex but becoming more convex towards the apex, the third with three or four and the fifth with one or two (towards the apex), the seventh with one (at the shoulder), and the ninth with two or three (at the apex), coarse setiferous punctures, the punctures (the one on the seventh excepted) usually fuscous in colour and extending completely across the interstice, the apices obtuse; legs (and under surface) varying in colour from piceous to reddish-testaceous.

Length 8–10 millim.; breadth 2–2⅔ millim. (♂ ♀.)

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Var. α. Varying in colour from black to castaneous, the elytra entirely æneous or suffused with that colour.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Var. β. Reddish-castaneous or reddish-testaceous, each elytron usually with a piceo-æneous lateral stripe extending from the shoulder to about (or beyond) the middle, the setiferous impressions not darker in colour.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Purula, San Gerónimo, Chacoj (*Champion*).

Var. γ. More elongate; reddish-castaneous, the elytra (except along the suture) indeterminately suffused with greenish-æneous.

Hab. GUATEMALA, Sinanja (*Champion*).

Var. δ. Shorter; piceous-brown, the elytra piceous or piceo-æneous with the disc indeterminately lighter.

Hab. GUATEMALA, Chacoj (*Champion*).

The type-form and the var. β were captured in numbers; of the other varieties we have only two or three examples of each. The typical form of *S. multiformis* resembles that of *S. nigrosparsa*, as described by Mäklin; it differs from it in having the head and thorax very much smoother, the latter being closely and minutely punctured (not scabrous), almost immarginate at the sides (in *S. nigrosparsa* the sides are very distinctly margined throughout), and with less prominent anterior angles. There are no setiferous impressions at the apex of the first elytral interstice, and only two or three towards the apex of the third and fifth, in *S. multiformis*. This species appears to be still more variable in colour than *S. nigrosparsa*; the typical form much resembles a *Calleida* inhabiting the same district. The apical joint of the antennæ of the male varies in length, and in some Chiriqui examples nearly (if not quite) equals the six preceding joints united. The tibiæ are not grooved on their outer edge.

24. **Statira tolensis.**

Elongate, subopaque, reddish-testaceous, the elytra of a more testaceous tint. Head closely and finely punctured; the eyes large, black; antennæ ferruginous, moderately stout, the apical joint (♂) about as long as joints 7–10 united; prothorax convex, as long as broad, the sides obsoletely margined at the base and apex, a little rounded at the middle, somewhat oblique in front, and strongly constricted behind, the

hind angles acute, the basal margin thick, moderately raised, and at the sides grooved within, the surface finely and densely punctured, the disc more sparsely so in the middle behind and there somewhat flattened; elytra with very shallow intrahumeral depression, long, widest beyond the middle, deeply striate throughout, the striæ with closely packed fine transverse impressions, the interstices convex, more strongly so towards the apex, the third with about six and the fifth with three (widely scattered between the base and apex), the seventh with one (at the shoulder), and the ninth with about six (towards the apex), fine setiferous punctures, the apices obtuse; legs and under surface testaceous, the former rather stout.

Length 11¼ millim.; breadth 2–2⅔ millim. (♂.)

Hab. Panama, Tolé (*Champion*).

One example only. More elongate, larger, and more robust than *S. penicillata*, and also differing thus:—The eyes are larger; the thorax is not completely margined at the sides, and the surface is less densely and less confluently punctured (finely scabrous in *S. penicillata*); the elytra have no setiferous impressions on the first interstice and very few on the third and fifth; the legs are stouter; and the posterior tibiæ have not a brush of short hairs in the male. *S. tolensis* is more elongate than *S. cæruleipennis*, to which it is perhaps more nearly allied, and has larger eyes, more slender antennæ, a narrower thorax, and much longer elytra, the latter with fewer setiferous impressions on the third and fifth interstices.

25. **Statira vilis.** (Tab. I. fig. 20, ♂.)

Statira vilis, Mäkl. Act. Soc. Fenn. vii. p. 592[1].

Hab. Mexico[1], Tuxtla, Playa Vicente (*Sallé*), Jalapa, Tapachula in Chiapas (*Höge*), Atoyac, Teapa (*H. H. Smith*); British Honduras, R. Hondo, Belize (*Blancaneaux*); Guatemala, Coatepeque, El Reposo, San Isidro, Pantaleon, Zapote, Tocoy, Teleman, Panzos, Cahabon (*Champion*); Panama, Bugaba, Volcan de Chiriqui, David (*Champion*).

Var. Entirely piceous, the prothorax almost smooth.

Hab. Panama, Bugaba (*Champion*).

This is a common and widely distributed species in Central America. In the form described by Mäklin the head and thorax are reddish-testaceous, the elytra black or piceous, and the legs and under surface piceous; the insect, however, is often entirely reddish-testaceous, about one third of our very numerous examples being thus coloured. *S. vilis* is a small, moderately elongate, shining species, with the eyes small, the head and thorax minutely and sparsely (sometimes more thickly) punctured, the latter obsoletely margined at the extreme base, and the elytra rather deeply punctate-striate, the third, fifth, and ninth (and sometimes the seventh) interstices each having from two to four widely scattered setiferous impressions. The apical joint of the antennæ in the male equals about five, and in the female rather more than three, of the preceding joints united. Of the variety a single example only was captured.

26. Statira sobrina.

Elongate, narrow, rather convex, moderately shining, fusco-testaceous, the head and the basal and apical margins of the prothorax reddish-testaceous. Head broad, with exceedingly minute scattered punctures (only visible under a strong lens), the eyes moderately large; antennæ (♂) reddish-testaceous, long, moderately slender, the apical joint about as long as joints 5–7 united; prothorax subcylindrical, about as broad as long, the sides obsoletely margined at the base and apex, moderately rounded anteriorly, and strongly constricted behind, the hind angles acute and very prominent, the basal margin raised, the surface sparsely and very minutely punctured; elytra with rather deep intrahumeral depression, long, subparallel in their basal half, very finely punctate-striate, the striæ becoming deeper towards the apex, the interstices flat, feebly convex towards the apex, the third with about eight (two or three towards the base and the rest between the middle and apex), the fifth with one or two (near the apex), the seventh with one (at the shoulder), and the ninth with two (at the apex), fine setiferous punctures, the apices obtuse; beneath reddish-castaneous; legs rather long, moderately slender, reddish-testaceous, the femora smooth and glabrous.

Length 7 millim.; breadth 2 millim. (♂.)

Hab. Mexico (*coll. F. Bates*).

A single male example only of this inconspicuous species, without more definite locality, is contained in Mr. F. Bates's collection. *S. sobrina* is chiefly characterized by its narrow elongate shape, fusco-testaceous colour, very minutely punctured head and thorax, and reddish-testaceous limbs; the third elytral interstice has about eight setiferous impressions (scattered between the base and apex), and the fifth and ninth have each one or two near the apex. *S. sobrina* closely resembles *S. irazuensis*, but differs in its much broader head, stouter antennæ and legs, and distinctly (but very finely) punctured thorax, and in the elytral interstices being rather convex towards the apex, the third having more numerous setiferous impressions. From pallid forms of *S. limbata* and *S. vilis* its more parallel shape and other characters sufficiently distinguish it.

27. Statira irazuensis.

Elongate, subopaque, obscure testaceous. Head narrow, almost smooth, the eyes small; antennæ testaceous, slender, the apical joint (♀) a little longer than joints 9 and 10 united; prothorax narrow, convex, the sides finely margined at the base and apex, much rounded about the middle, slightly oblique in front, and strongly constricted behind, the anterior angles a little prominent, the hind angles acute, the basal margin moderately raised and at the sides grooved within, the surface almost smooth; elytra with shallow intrahumeral depression, long, subparallel, finely punctate-striate, the striæ becoming shallower towards the apex, the interstices flat throughout, the third and ninth each with two or three fine setiferous punctures near the apex, the apices obtuse; legs testaceous, slender.

Length 8 millim.; breadth 2 millim. (♀.)

Hab. Costa Rica, Volcan de Irazu 6000 feet (*Rogers*).

A single female example only. *S. irazuensis* resembles the pallid unicolorous form of *S. limbata*; it differs from it, however, in its proportionately narrower head and thorax (the latter with less rounded anterior angles), more slender antennæ, and more parallel and longer elytra, the latter only having two or three setiferous impressions on the third and ninth interstices.

28. **Statira ignita.** (Tab. I. fig. 21, ♀.)

Moderately elongate, rather broad, depressed, blackish-æneous, moderately shining; the elytra duller, greenish-æneous, with the base (except along the suture) broadly metallic green, the green band followed by a narrow curved purplish-cupreous one, the latter shading off into golden behind. Head broad, closely and coarsely punctured, the eyes (♀) small and widely separated; antennæ (♀) piceo-ferruginous, long and rather slender, the joints elongate, the apical joint the length of joints 9 and 10 united; prothorax rather broader than long, the sides finely margined from the base to the apex, but feebly rounded anteriorly (almost straight in front), and only moderately constricted behind, the basal margin much raised but not grooved within, the hind angles acute, the disc with a shallow oblique groove on each side behind, the surface closely, coarsely, and equally punctured; elytra with very shallow intrahumeral depression, rather broad, comparatively short, widest beyond the middle, finely and rather deeply punctate-striate, the punctures very closely placed, the interstices very feebly convex to about the middle and flat beyond, the first with one (at the extreme apex), the third with two (towards the apex), the fifth with one (far beyond the middle), the seventh with two (one near the apex and one near the shoulder), and the ninth with three (at the apex), coarse, but shallow, setiferous punctures, the apices a little produced, obtuse; beneath piceous-brown, shining; legs slender, piceo-ferruginous, the femora darker.

Length 9 millim.; breadth (at shoulders) $2\frac{1}{2}$ millim. (♀.)

Hab. Mexico, Jalapa (*Höge*).

A single specimen. This species and *S. isthmiaca* possess a different facies from the other Central-American members of the genus, owing to their comparatively short, broad, and depressed elytra. *S. ignita* possesses a very peculiar system of coloration of the elytra. Allied forms are found in South America.

29. **Statira cupreotincta.** (Tab. I. fig. 22, ♀.)

Elongate, light reddish-castaneous, the elytra greenish-æneous, with the sides rather broadly from the base to the apex (including the shoulders) suffused with cupreous, the base and a narrow space within the cupreous part of a golden tint, shining. Head nearly smooth, except for three or four coarse shallow irregular impressions between the eyes anteriorly and a deep and coarse puncture on either side behind; eyes moderately large; antennæ (♀) ferruginous, rather short, the intermediate joints rather elongate, 8–10 subequal, 11 not so long as 8–10 united; prothorax rather broader than long, somewhat depressed on the disc, the sides very finely margined throughout, strongly constricted behind, and but little rounded anteriorly, the hind angles very sharp and prominent, the basal margin much raised though very indistinctly grooved within, the disc with a rather deep transverse impression on either side before, and an oblique one on either side behind, the middle, the surface with scattered irregular punctures, which are more distinct at the base than elsewhere; elytra with long and shallow intrahumeral depression, comparatively elongate, widest about the middle, parallel anteriorly, shallowly transversely impressed on the disc below the base, finely but rather deeply punctate-striate, the punctures closely placed, the interstices almost flat, the first with two (close to the apex), the third with about four (between the middle and apex), the fifth with two or three (one at or before the middle and one or two towards the apex), and the ninth with three (towards the apex), coarse and deep setiferous punctures, and the seventh with a fine one at the shoulder, the apices obtuse; beneath reddish-testaceous; legs slender, reddish-testaceous.

Length $8\frac{1}{2}$ millim.; breadth (at shoulders) $2\frac{1}{3}$ millim. (♀.)

Hab. Panama, Bugaba 1000 feet (*Champion*).

A single female example. This species somewhat resembles *S. variabilis*, but may be readily distinguished by its transverse and laterally margined thorax, transversely impressed elytra, glabrous anterior femora, and other characters noticed above. The

fifth elytral interstice has four impressions on one elytron and only one on the other. *S. cupreotincta* cannot be confounded with any other species here enumerated; it approaches the Colombian *S. cupripennis*, Mäkl., in some of its characters, though differing in its short thorax and other particulars.

30. **Statira veræpacis.** (Tab. I. fig. 23, ♂.)

Very elongate, depressed, dull brownish-piceous, the elytra æneous or greenish-æneous and slightly shining. Head almost smooth, the eyes moderate in size; antennæ very long and quite slender in both sexes, fusco-ferruginous—the apical joint in the male as long as joints 8–10 (these latter elongate), in the female rather longer than 9 and 10, united; prothorax about as long as broad, a little flattened on the disc, the sides very narrowly margined throughout, feebly rounded about the middle, moderately constricted behind, and sometimes feebly emarginate anteriorly, the hind angles very acute, the basal margin much raised but not grooved within, the surface impunctate; elytra with long and shallow intrahumeral depression, very elongate and depressed, gradually widening from the base to far beyond the middle, finely and lightly punctate-striate, the punctures approximate but more scattered towards the apex, the interstices flat (the third, fifth, and seventh sometimes slightly convex towards the base), the first with one or two (close to the apex), the third with about five (widely separated, the anterior two fine, the others deeper and closer together), the fifth with one (towards the apex), the seventh with one (at the shoulder), and the ninth with four or five (close together near the apex), setiferous punctures, the apices slightly produced but not mucronate; beneath brownish-piceous, shining; legs very long and slender, piceous.

Length $10\frac{1}{2}$–12 millim.; breadth (at shoulders) 3 millim. (♂ ♀.)

Hab. Guatemala, Purula in Vera Paz (*Champion*).

Seven examples. The very long and slender limbs, depressed form, smooth and dull head and thorax, and elongate shape distinguish this species from all others of the genus here enumerated. The following, *S. curticollis*, is allied to it; but differs in having shorter legs and antennæ, the intermediate joints of the latter much less elongate in both sexes, the thorax transverse, &c.

31. **Statira curticollis.** (Tab. I. fig. 24, ♂.)

Very elongate, depressed, brownish-black, opaque, the elytra piceous-brown and not so dull. Head with a few minute shallow scattered punctures, the eyes small and widely separated; antennæ ferruginous, rather short, moderately stout—the apical joint in the male about as long as joints 7–10, in the female 8–10, united; prothorax transverse, the sides narrowly margined from the base to the apex, very little rounded and almost straight in front, and moderately constricted behind, the hind angles acute, the basal margin only a little raised and at the sides grooved within, the surface smooth; elytra with long and deep intrahumeral depression, very elongate, if anything widest beyond the middle, subcoriaceous in texture, the apical portion shining, finely and very shallowly punctate-striate, the punctures moderately close, the interstices flat or very feebly convex, obsoletely punctured towards the apex, the first with about five (near the apex), the third and fifth each with from seven to ten (scattered between the base and apex), the seventh with one (at the shoulder), and the ninth with from seven to ten (between the base and apex), shallow setiferous punctures, the apices a little produced but obtuse; legs long and slender, obscure testaceous.

Length $8\frac{2}{3}$–$9\frac{1}{2}$ millim.; breadth $2\frac{1}{4}$–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Capulalpam, Las Peras (*Sallé*).

Six examples.

Var. α. Larger; the elytra with a slight greenish-æneous tinge, more elongate, the setiferous punctures on the third, fifth, and ninth interstices much fewer in number (about four or five on each), the two outer striæ almost obliterated.

Length 10⅓–11 millim.; breadth 2¾–3 millim. (♂ ♀.)

Hab. MEXICO, Salazar, Amecameca in Morelos (*Höge*).

Two examples.

Var. β. The third and fifth interstices of the elytra with two or three very widely separated setiferous impressions only, and the ninth with several, and the first with four or five (as in the type), near the apex.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Var. ? Broader; the setiferous impressions on the alternate interstices almost entirely obsolete (one or two only visible on each at most), the apical interstices more distinctly punctured.

Length 11 millim.; breadth 3¼ millim. (♀.)

Hab. GUATEMALA, Purula (*Champion*). One example.

This is a depressed elongate species, with smooth, opaque, and transverse thorax, and very shallowly and finely punctate-striate elytra; the latter are subcoriaceous in texture and at the apex shining and punctured, and also have some shallow setiferous impressions on the first, third, fifth, and ninth interstices. *S. curticollis* is different in facies from the allied forms.

The var. α is represented by two mutilated specimens (the thorax in one of these is more rounded at the sides in front), and the var. β by a similar number; the var. ? from Guatemala, of which we have only a single abnormal female example, is possibly distinct.

Labelled with the MS. name *S. brevicollis* in Mr. F. Bates's collection, a name already preoccupied for another species.

32. Statira æneipennis.

Elongate, depressed, rather broad, varying in colour from blackish-æneous to piceo-castaneous, the elytra bright æneous or greenish-æneous with a golden tint, and the sides more or less suffused with cupreous, very shining. Head with a few fine scattered punctures, the eyes moderately large; antennæ moderately long, rather slender, fusco-ferruginous, the basal joints darker—the apical joint in the male not quite so long as joints 7–10 (these latter rather elongate), in the female rather less than 8–10, united; prothorax about as long as broad, the sides very finely margined throughout, moderately rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin much raised but not grooved within, the surface with a few fine indistinct scattered punctures; elytra with long and narrow intrahumeral depression, elongate and depressed, considerably wider behind the middle than at the base, finely and very lightly punctate-striate, the punctures approximate but more scattered towards the apex, the interstices quite flat throughout, the first with two or three (near the apex), the third and fifth each with about four (one near the base, the others towards the apex), the seventh with one (at the shoulder), and the ninth (usually) with four or five (between the middle and apex), moderately coarse setiferous punctures, the apices a little produced; legs slender, moderately long, piceous or piceo-castaneous.

Length 9½–11⅓ millim.; breadth (at shoulders) 2½–3 millim. (♂ ♀.)

Hab. GUATEMALA, Purula and Sinanja in Vera Paz (*Champion*).

Three examples and fragments of two others. Allied to *S. veræpacis*, but with the upper surface much more shining; the legs (the tarsi especially) and antennæ much shorter, the latter not nearly so slender; the elytra shorter and much more brilliant, and the head and thorax shining and obsoletely punctured. In its brilliant metallic colour, *S. æneipennis* resembles certain species of *Calleida* inhabiting the same district.

33. **Statira ærata.** (Tab. I. fig. 25, ♂.)

Elongate, rather depressed, blackish-æneous, the elytra æneous, shining. Head with a few very fine scattered punctures, the eyes moderately large; antennæ rather slender, moderately long, ferruginous, the basal joints a little darker—the apical joint in the male equalling joints 7–10, in the female 8–10, united; prothorax about as long as broad (sometimes a little shorter), the sides narrowly but distinctly margined from the base to the apex, a little rounded or slightly oblique in front, and strongly constricted behind, the hind angles very acute and prominent, the basal margin much raised and shallowly grooved within (deeply so at the sides), the surface very minutely, sparsely, and indistinctly punctured; elytra with long and deep intrahumeral depression, very shallowly transversely impressed below the base, widest beyond the middle, moderately long, the disc slightly flattened, very closely, finely, and rather deeply punctate-striate, the punctures transverse, the interstices flat or very feebly convex, the first with three or four (near the apex), the third and fifth each with seven or eight (scattered between the base and apex), the seventh with from four to six (one at the shoulder and the others between the middle and apex), and the ninth with nine or ten (between the base and apex), rather deep setiferous punctures, the apices obtuse; beneath brownish-piceous, shining; legs slender, moderately long, piceous, the tarsi lighter.

Length 9–10 millim.; breadth (at shoulders) $2\frac{1}{2}$–$2\frac{3}{4}$ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*), Atoyac in Vera Cruz (*H. H. Smith*).

Var. Entirely reddish-testaceous, the elytra with a translucent æneous tinge; the setiferous impressions on the seventh interstice (except in one example) more numerous and extending upwards towards the shoulder. (♂ ♀.)

Hab. Guatemala, Purula (*Champion*).

Two examples of the type and three of the variety. This insect is closely allied to *S. mexicana*, but it cannot be satisfactorily treated as a variety of that species. Out of a long series of examples of the latter, not one has the setiferous impressions on the ninth elytral interstice continued up to the base (as in *S. ærata*), nor more than one or two (at most and oftener than not obsolete) on the seventh near the apex. The setiferous impressions on the apical third are not preceded, as in most examples of *S. mexicana*, by a slight elevation, and the striæ are not so shallowly punctured; the anterior angles of the thorax are also less prominent. The antennæ are similarly formed in both species. Not so brilliantly metallic as *S. æneipennis* (the elytra not cupreous at the sides), and the setiferous impressions on the elytra more numerous and more scattered.

34. **Statira mexicana.** (Tab. II. fig. 1, ♂.)

Moderately elongate, shining, black or nigro-æneous, the elytra æneous or greenish-æneous. Head densely and rugulosely, or closely and finely, or sparingly and minutely, punctured, the eyes not very large; antennæ more or less ferruginous, moderately long, sometimes darker towards the base—the apical joint

in the male fully or nearly equalling five, in the female about three, of the preceding joints united; prothorax about as broad as long (sometimes broader), the sides margined from the base to the apex, a little rounded before the middle, oblique in front, and strongly constricted behind, the anterior angles prominent, the hind angles acute, the basal margin moderately raised, and at the sides grooved within, the disc shallowly impressed in the middle before the base, the surface closely and minutely (sometimes more coarsely, sometimes still more finely) punctured; elytra with deep intrahumeral depression, moderately long, sometimes feebly transversely impressed below the base, very finely punctate-striate, the punctures quite shallow and approximate, the interstices feebly convex (flatter on the basal part of the disc), the first with from four to seven (near the apex), the third with from seven to ten and the fifth with from five to eight (scattered between the base and apex), the seventh with from one to three (one at the shoulder, and one or two at the apex, the latter very often obsolete), and the ninth with from four to six (near the apex), rather coarse setiferous punctures, the punctures on the apical third each usually preceded by a more or less distinct elevation, the apices obtuse; legs more or less piceous, the tarsi ferruginous.

Length $7\frac{1}{2}$–10 millim.; breadth $2\frac{1}{4}$–3 millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*), Cordova (*Sallé*).

Var. a. The prothorax and legs, and sometimes the head and elytra in great part, reddish-testaceous.

Hab. Mexico, Jalapa (*Höge*).

Var. β. Piceo- or reddish-testaceous, the elytra sometimes with a translucent æneous tinge; the setiferous impressions on the elytra not preceded by a slight elevation.

Hab. Mexico, Jalapa, Esperanza (*Höge*), Cordova (*Sallé*).

Numerous examples of the type and of the var. α were collected by Herr Höge at Jalapa; the var. β is an immature form.

This species may be distinguished from *S. multiformis* by the thorax being completely margined at the sides and having prominent anterior angles; and also by the more numerous setiferous impressions on the third and fifth elytral interstices, the first also having several near the apex (there are none in *S. multiformis*), and the impressions on the apical third usually preceded by a feeble elevation. From *S. nigrosparsa* &c. its non-scabrous thorax and more numerous setiferous impressions on the elytra sufficiently separate it. The head and thorax vary a great deal in shape and sculpture (though the latter always has the punctures separate one from another, and is never scabrous); they are also narrower in some male examples than in others.

35. **Statira æneotincta.**

Closely allied to *S. mexicana*, and differing as follows:—More elongate, the elytra especially; varying in colour from brownish-piceous to reddish-testaceous, the elytra more or less testaceous and often with a translucent æneous tinge; the antennæ longer, and with more elongate penultimate joints in both sexes; the prothorax with less prominent anterior angles; the elytral interstices obsoletely punctured at the apex, the first with about four (near the apex), the third and fifth each with about six (scattered between the base and apex), the seventh with one (at the shoulder), and the ninth with four or five (near the apex), setiferous punctures; the rest as in *S. mexicana*.

Length $9\frac{1}{2}$–$11\frac{1}{4}$ millim.; breadth $2\frac{1}{4}$–3 millim. (♂ ♀.)

Hab. Mexico, Jalapa, Cordova (*Höge*); Guatemala, Chiacam (*Champion*).

Nine examples. This is an immature-looking species allied to *S. mexicana*. Its

more elongate shape, longer antennæ, and the elytral interstices obsoletely punctured towards the apex (approaching *S. punctipennis*) are sufficient to distinguish it. In one abnormal example the thorax is sinuate at the sides in front, and the elytra are not punctured at the apex, and have the setiferous impressions partly obliterated.

There is an example of this species in Mr. F. Bates's collection, from that of Dejean, labelled *Statira megatoma* *, and as from the United States; this locality is doubtless erroneous.

36. Statira punctipennis.

Elongate, moderately shining, varying in colour from piceous to obscure reddish-brown; the elytra with a more or less distinct æneous lustre, more shining at the apex, and usually darker than the prothorax. Head sparsely and finely punctured, and often shallowly foveate in the centre between the eyes, the latter small and very widely separated in both sexes; antennæ piceo-ferruginous or ferruginous, moderately stout—the apical joint in the male rather shorter than joints 7–10, in the female 8–10, united; prothorax comparatively broad, transverse, the sides sharply margined from the base to the apex, a little rounded anteriorly (sometimes almost straight in front), and strongly constricted behind, the hind angles acute, the basal margin sharply raised, and at the sides deeply grooved within, the disc shallowly transversely depressed in the middle behind, the surface finely, very irregularly, and somewhat closely punctured (often subscabrous or aciculate in places between the punctures); elytra with long and deep intrahumeral depression, long, finely and deeply punctate-striate, the punctures crowded and transverse in shape from the base to about the middle, and finer and shallower towards the apex, the interstices flat or feebly convex, thickly and shallowly, but distinctly, punctured (the punctures deeper towards the apex), the first with two or three (at the apex), the third and fifth each with one or two (widely separated, and between the middle and apex), the seventh with one (at the shoulder), and the ninth with two or three (near the apex), fine shallow setiferous punctures, the apices obtuse; beneath obscure reddish-brown, shining; legs varying in colour from piceous-brown to piceo-testaceous, rather stout.

Length 9–10 millim.; breadth (at shoulders) $2\frac{1}{2}$–$2\frac{3}{4}$ millim. (♂ ♀.)

Hab. Guatemala, Capetillo (*Champion*).

Numerous examples. In this species the head is finely and sparsely punctured; the eyes are small and very widely separated; the thorax is transverse, broad, and sharply margined at the sides; and the elytra are long, rather deeply striate (the punctures transverse in shape), and have the interstices thickly punctured (very shallowly so to beyond the middle, and more deeply so at the apex), the first, third, fifth, and ninth each with two or three very shallow setiferous impressions. The thorax varies a good deal in sculpture, and the setiferous elytral impressions are sometimes obsolete. *S. punctipennis* is closely allied to *S. æneo-tincta*, but may be distinguished by its very widely separated eyes, broader and more sharply margined thorax, punctured elytral interstices, fewer setiferous impressions, &c.

37. Statira testacea.

Very elongate, opaque, reddish-testaceous, the prothorax sometimes suffused with piceous; the elytra shining, obscure testaceous, sometimes with a faint æneous lustre. Head densely and roughly punctured; the

* This name appears in Dejean's Catalogue (3rd edit. p. 236), with the locality "Amer.-Bor."

eyes black, small, and widely separated; antennæ ferruginous or testaceous, rather slender, moderately long—the apical joint in the male about as long as joints 7–10, in the female 8–10, united; prothorax narrow, about as long as or longer than broad, the sides finely margined from the base to the apex, feebly rounded anteriorly (sometimes almost straight in front), and moderately constricted behind, the hind angles acute, the basal margin moderately raised, the entire surface finely and very densely scabrous; elytra with rather deep intrahumeral depression, long, finely punctate-striate, the punctures approximate and transverse in shape to beyond the middle, the interstices flat or feebly convex, sometimes obsoletely punctured at the apex, the first with two or three (at the apex), the third with from six to eight and the fifth with four or five (scattered between the base and apex), the seventh with two or three (one at the shoulder and one or two at the apex, the latter often obsolete), and the ninth with from five to eight (scattered between the base and apex, the anterior ones often obsolete), rather deep setiferous punctures, the apices obtuse; legs slender, more or less testaceous.

Length $7\frac{2}{3}$–$9\frac{1}{2}$ millim.; breadth (at shoulders) 2–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*), Cordova (*Sallé*, *Höge*).

Numerous examples. *S. testacea* is closely allied to *S. æneotincta*, but constantly differs in its uniformly scabrous and quite opaque thorax. As in *S. mexicana*, the setiferous impressions are sometimes obliterated on the apical part of the seventh interstice.

38. **Statira nigrosparsa.** (Tab. II. fig. 2, ♂.)

Statira nigrosparsa, Mäkl. Act. Soc. Fenn. vii. p. 590 [1].

Hab. Mexico [1], Cordova (*Sallé*), Jalapa, Chilpancingo (*Höge*); Nicaragua, Chontales (*Belt*).

Var. α. The elytra testaceous, the base very broadly, or the sides to about the middle, piceous.

Hab. Guatemala, Cubilguitz (*Champion*).

Var. β. Piceous- or reddish-brown, the elytra varying in colour from piceous-brown to fusco-testaceous; the prothorax a little more dilated at the sides before the middle, the anterior angles not so prominent; the head not so closely punctured.

Hab. Guatemala, San Gerónimo, near the city, Capetillo (*Champion*).

This species is not uncommon in Mexico and Guatemala; from Nicaragua a single example only has been received. The form described by Mäklin, of which we have two from the Sallé collection, is an immature variety in which the elytra are pallid testaceous, and the four or five setiferous impressions on the third and fifth, and the two or three on the first and ninth, interstices are fuscous in colour; one of these is figured. As in many other species of this genus, the colour is very variable: in all our other specimens the elytra are unicolorous, or, at most, as in the var. *α*, stained with piceous at the base; in rare dark-coloured individuals they have a faint translucent greenish-æneous tinge. *S. nigrosparsa* is a moderately elongate species, with the head more or less roughly punctured (opaque in some examples, slightly shining in others); the antennæ in the male with the apical joint equalling four or five, in the female about three or four, of the preceding joints united; the thorax margined at the sides,

with prominent front angles, and the surface finely scabrous and opaque; and the elytra rather deeply punctate-striate. The apical joint of the antennæ varies a little in length in both sexes. The variety β was collected by myself in numbers at Capetillo; in some of these the elytral interstices are obsoletely punctured at the apex. The species varies from 8–11 millim. in length. *S. nigrosparsa* differs from *S. rugicollis* and *S. guatemalensis* in its more finely scabrous thorax and ungrooved tibiæ, and from the former in the much less numerous setiferous impressions on the elytra; the two last-mentioned species having sulcate tibiæ they are placed towards the end of the genus.

39. **Statira penicillata.** (Tab. II. fig. 3, ♂.)

Closely allied to *S. testacea*, and differing as follows:—Reddish-testaceous; the prothorax not so densely scabrous, slightly shining; the elytral interstices strongly convex (except at the base), the first with about eight (four at the base and four at the apex), the third and fifth each with twelve or fourteen (scattered between the base and apex), the seventh with one or two (at the shoulder), and the ninth with four or five (towards the apex), deep setiferous punctures; the posterior tibiæ in the male with a dense brush of very short hairs on the inner side near the base; the rest as in *S. testacea*.

Length 9 millim.; breadth 2½ millim. (♂.)

Hab. Mexico, Jalapa (*Höge*).

This is the only species of the genus known to me possessing the peculiar above-described sexual character on the posterior tibiæ in the male. Unfortunately our male examples of *S. testacea* are in a mutilated condition and without hind legs; they may or may not possess this character. *S. penicillata* differs, however, from *S. testacea* in the much more numerous setiferous impressions on the first, third, and fifth elytral interstices, and also in all the interstices being very convex. A single male example.

40. **Statira alternans.**

Elongate, subparallel, subopaque, reddish-brown, the elytra obscure testaceous and slightly shining. Head densely and rugosely punctured, the eyes large; antennæ long and stout, ferruginous, the apical joint in the male about as long as joints 5–8 united; prothorax transverse, broad, the sides distinctly margined from the base to the apex, a little rounded before the middle, slightly oblique in front, and strongly constricted behind, the hind angles very acute, the basal margin sharply raised, and at the sides shallowly grooved within, the disc a little flattened behind, the surface finely scabrous; elytra with shallow intra-humeral depression, long, rather broad, parallel, closely and finely punctate-striate, the interstices flat, the first, third, fifth, seventh, and ninth each with a row of rather closely placed deep setiferous punctures, extending from the base to the apex, the apices obtuse; legs testaceous, rather stout, somewhat thickly punctured and clothed on all sides with short hairs, the tibiæ not grooved on their outer edge.

Length 11 millim.; breadth 3 millim. (♂.)

Hab. Mexico, Tepansacualco (*Sallé*).

A single immature male example only, but undoubtedly distinct from the other species here enumerated. In many respects *S. alternans* resembles *S. sulcicrus*. It differs as follows:—The tibiæ are not grooved on their outer edge; the antennæ (♂) are longer, and have a longer apical joint; the eyes are larger; the thorax is more

distinctly margined, broad, and transverse; and the elytra are broader and more parallel, and have the interstices flat, the setiferous impressions on the alternate ones deeper and not quite so numerous. *S. alternans* is also allied to *S. leptotracheloides*, but more distantly.

41. **Statira tuberosa.** (Tab. II. fig. 4, ♀.)

Very elongate, depressed, opaque, obscure reddish-brown, the elytra piceo-testaceous with a brassy lustre, and not quite so dull. Head finely and rather thickly punctured, the eyes (♀) large; antennæ obscure testaceous, rather slender, the apical joint in the female about as long as joints 8–10 united; prothorax rather longer than broad, the sides finely margined from the base to the apex, rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin sharply raised, the surface almost smooth (under a very strong lens a few minute scattered punctures are visible); elytra with long and shallow intrahumeral depression, very long and depressed, widest beyond the middle, subparallel anteriorly, with rows of fine shallow punctures placed upon very shallow striæ, the punctures approximate towards the base, but becoming more scattered and finer towards the apex, the interstices quite flat, the first, third, and fifth each with from ten to twelve (scattered between the base and apex), and the seventh and ninth each with from six to eight (one at the base and the others between the middle and apex), very shallow setiferous punctures, the punctures from the middle to the apex each preceded by a small conical elevation, the apices obtuse; beneath piceo-testaceous, shining; legs long and slender, obscure testaceous, the knees a little darker.

Length 10 millim.; breadth (at shoulders) $2\frac{1}{2}$ millim. (♀.)

Hab. Mexico, Jalapa (*Höge*).

One female example only. Allied to *S. nodulosa*, but differing in the thorax being smoother, and with the anterior angles not prominent, and in the elytra having not nearly so many setiferous punctures on the alternate interstices, the tubercles preceding the punctures more conical, and not becoming elongate towards the apex, and the striæ more finely and less closely punctured. *S. tuberosa* closely resembles *S. æneotincta*; it is, however, ready distinguished by the opaque thorax and tuberculate elytra.

42. **Statira nodulosa.**

Very elongate, rather depressed, dull piceo-castaneous, the elytra with a greenish-æneous lustre and slightly shining. Head finely and somewhat thickly punctured; eyes (♂) very large, rather narrowly separated; antennæ (♂) ferruginous, long, the apical joint equalling joints 6–10 united; prothorax about as long as broad, the sides finely but distinctly margined from the base to the apex, rounded about the middle, strongly constricted behind, and sinuate-emarginate in front, the anterior angles sharply defined and projecting laterally, the hind angles acute and very prominent, the basal margin much raised, and grooved within towards the sides, the disc shallowly transversely impressed in the middle behind, the surface very minutely, shallowly, and somewhat thickly punctured; elytra with long intrahumeral depression, very long, widest beyond the middle, finely punctate-striate, the punctures very closely placed, the interstices flat towards the base, slightly convex behind, the first, third, fifth, seventh, and ninth each with a row of closely placed, moderately coarse setiferous punctures, the setiferous punctures (except on the basal part of the disc) each preceded by a small feebly raised tubercular elevation and the elevations themselves becoming more elongate towards the sides and apex, the apices slightly pointed; legs rather thickly punctured, long, fusco-ferruginous, the femora pubescent, the tibiæ somewhat densely clothed with short hairs within.

Length $11\frac{1}{2}$ millim.; breadth (at shoulders) 3 millim. (♂.)

Hab. Guatemala, Panajachel 5000 feet (*Champion*).

One male example only, captured on the margin of the Lake of Atitlan. *S. nodulosa* in its general shape and punctured alternate elytral interstices approaches *S. ciliata*; but differs in its finely and closely punctured head, very much larger eyes, very long apical joint to the antennæ, sharp anterior angles of the thorax, the punctures of the alternate elytral interstices not preceded by a tubercle, &c. The sharp and prominent anterior angles of the thorax and the tuberculate elytra are characteristic of *S. nodulosa*.

43. **Statira tuberculifera.** (Tab. II. fig. 5, ♀.)

Very elongate, rather depressed, dull piceous-black, the elytra æneous and slightly shining. Head finely and rather thickly punctured; eyes (♀) very large; antennæ (♀) ferruginous, long, the apical joint not quite so long as joints 7–10 united; prothorax as long as broad, the sides very distinctly margined from the base to the apex, a little rounded about the middle, strongly constricted behind, and sinuate-emarginate in front, the anterior angles sharply defined and projecting laterally, the hind angles acute and very prominent, the basal margin much raised, the disc a little flattened in the middle behind, the surface shallowly, minutely, and somewhat thickly punctured; elytra with long intrahumeral depression, very elongate, widest beyond the middle, finely punctate-striate, the punctures closely placed, the interstices flat towards the base, slightly convex towards the sides and apex, the first, third, fifth, seventh, and ninth each with a row of closely placed setiferous punctures, the setiferous punctures (except at the base) each preceded by a very distinct conical elevation, and the elevations themselves becoming elongate and strongly raised towards the sides and apex, those on the seventh interstice confluent at the base and forming a sharp longitudinal keel at the shoulder, the apices sharply pointed; beneath piceous-black, smooth, very shining; legs long, rather thickly punctured, the femora sparsely pubescent, the tibiæ somewhat densely clothed with short hairs within.

Length 14 millim.; breadth $3\frac{2}{3}$ millim. (♀.)

Hab. Guatemala, Coban (*Conradt*).

A single female example. *S. tuberculifera* is closely allied to *S. nodulosa*, but may easily be distinguished by the tubercles of the elytra being much more raised and also larger in size, those on the seventh interstice forming a sharp keel at the shoulder; the apices of the elytra are also more pointed.

44. **Statira conspicillata.** (Tab. II. figg. 6, ♂; 7, var.)

Statira conspicillata, Mäkl. Act. Soc. Fenn. vii. p. 589[1].

Hab. Mexico[1], Cordova (*Sallé*), Jalapa, Tapachula in Chiapas (*Höge*), Atoyac, Teapa (*H. H. Smith*); British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Chacoj, Senahu, Zapote, Capetillo, Pantaleon, El Tumbador (*Champion*); Nicaragua (*Sallé*), Chontales (*Janson*); Panama, Volcan de Chiriqui 3000 feet (*Champion*).

This is one of the commonest and most widely distributed species of *Statira* inhabiting Central America; it may be known by its small size, shining surface, and reddish-testaceous colour, the elytra each with two large oblong yellowish spots, the spots each surrounded by a fuscous or piceous line. In a long series of examples (about 100) the insect shows a good deal of variation in the elytral markings:—The form described by Mäklin has the two oblong spots on each elytron narrowly edged with fuscous (the insect thus coloured almost exactly resembling certain species of *Euproctus*, a genus of Carabidæ

numerously represented in the same region); in another, the fuscous or piceous colour occupies the whole of the space between the spots and extends to the base (this form much resembling the European *Dromius quadrimaculatus*, Linn.); and in another (two examples from Capetillo), the anterior spot extends to the base and the posterior one to the apex, and the markings are thus limited to a common transverse fuscous band a little behind the middle, the fuscous colour extending anteriorly and posteriorly along the suture, and also in a similar way at the sides. In a very rare variety from Chiriqui the anterior spot is shortened and the posterior one much enlarged, and the base is broadly piceous, the posterior spot extending laterally upwards and only separated from the anterior one by a curved piceous line (fig. 7). All these numerous varieties are connected by intermediate examples, though the extreme forms look totally different. The apical joint of the antennæ in the male equals about four, in the female rather more than three, of the preceding joints united. The species varies from 5–7 millim. in length. Numerous allied forms inhabit Tropical South America. We figure two examples, both from Chiriqui.

45. **Statira pulchella.** (Tab. II. fig. 8, ♂.)

Statira pulchella, Mäkl. Act. Soc. Fenn. vii. p. 589[1].
Statyra pulchella, Dej. Cat. 3rd edit. p. 236[2].
Statyra lepida, Dej. Cat. loc. cit.[3]

Hab. Mexico [1 2 3], Cordova (*Sallé*), Jalapa (*Höge*), Atoyac (*H. H. Smith*).

This very distinct species was found in plenty by Herr Höge at Jalapa; it will be readily identified from our figure. The apical joint of the antennæ in the male is fully as long as five, in the female four, of the preceding joints united. *S. pulchella* is apparently confined to the Atlantic slope of Central Mexico. Allied forms inhabit Tropical South America.

46. **Statira nigromaculata.** (Tab. II. figg. 9, ♂; 10, var. ♀.)

Moderately elongate, testaceous, shining, the elytra with a lateral patch about the middle (varying in size, sometimes small, sometimes very large, and almost confluent at the suture, and only separated by a very narrow line), and the eyes, black or piceous. Head very minutely punctured between the eyes, and with a deep setiferous impression behind each, for the rest smooth, the eyes small; antennæ testaceous, rather short—the apical joint in the male equalling joints 7–10, in the female 8–10, united; prothorax convex, about as long as broad, the sides immarginate (sometimes obsoletely margined towards the base), rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin moderately raised and grooved within, the surface very minutely and somewhat thickly punctured; elytra with long and deep intrahumeral depression, widest beyond the middle, finely and lightly punctate-striate, the interstices flat, but becoming convex towards the apex, the third with five or six (between the middle and apex), the seventh with one (at the shoulder), and the ninth with three or four (near the apex) setiferous punctures, the apices obtuse; legs and under surface entirely testaceous.

Length $6\frac{1}{2}$–$7\frac{1}{2}$ millim.; breadth 1–$2\frac{2}{3}$ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*), Yolos (*Sallé*); Guatemala, San Gerónimo (*Champion*).

Five examples. *S. nigromaculata* is undoubtedly very closely allied to *S. pulchella*; but in the large series of the latter before me the common transverse black mark of the elytra shows no tendency to become obliterated. In the Guatemalan specimen (fig. 10) the lateral spots are extended inwards, and form a common broad median band (separated only by a narrow line along the suture) which is widest outwardly; the example from Yolos is intermediate between this one and the others. *S. nigromaculata* differs from *S. pulchella* in the head and thorax being still more finely punctured, the apical joint of the antennæ shorter in the male, and the elytral interstices convex towards the apex, as well as in the different pattern of the elytra.

47. **Statira triangulifer.** (Tab. II. fig. 11, ♀.)

Moderately elongate, shining, testaceous, the elytra with a common triangular patch at the base and another a little beyond the middle (the latter varying in size, but always broadest at the suture, and sometimes extending to the lateral margin, and sometimes narrowly continued along the suture to the scutellar patch and posteriorly towards the apex), and the eyes, black or piceous. Head very minutely punctured between the eyes, and with a deep setiferous puncture behind each, for the rest smooth, the eyes small; antennæ testaceous, rather long—the apical joint in the male about equalling joints 7–10 (the latter elongate), in the female 8–10, united; prothorax convex, about as broad as long, the sides immarginate, rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin moderately raised, the surface thickly but very minutely punctured; elytra with very shallow intrahumeral depression, widest beyond the middle, finely but rather deeply crenate-striate, the interstices flat or feebly convex, the third and ninth (and sometimes the fifth) with one or two setiferous punctures towards the apex, and the seventh with one at the shoulder, the apices obtuse; legs and under surface entirely testaceous.

Length $6\frac{1}{3}$–7 millim.; breadth $1\frac{1}{2}$–$1\frac{2}{3}$ millim. (♂ ♀.)

Hab. Mexico, El Camaron (*Sallé*), Tapachula in Chiapas (*Höge*); British Honduras, Belize, R. Hondo (*Blancaneaux*); Guatemala, Panzos, San Gerónimo, Zapote (*Champion*).

This insect is not uncommon in Guatemala and British Honduras, but is apparently rarer in Mexico. *S. triangulifer* is allied to *S. pulchella*, but differs in its narrower shape, smoother thorax, longer antennæ, and crenate-striate elytra, the latter differently marked—in *S. pulchella* the common basal patch is broader and more transverse, and the second band is always broadest laterally, instead of at the suture, as in *S. triangulifer*. The head and thorax in *S. pulchella* are invariably of a reddish-testaceous colour, these parts in *S. triangulifer* being uniformly testaceous; the intrahumeral depression of the elytra is also more deeply impressed in *S. pulchella*, and the latter has more setiferous impressions on the third interstice.

48. **Statira evanescens.** (Tab. II. fig. 12, ♀.)

Moderately elongate, slightly shining, testaceous or reddish-testaceous, the elytra with the shoulders, a common triangular, or elongate, scutellar patch (often connected along the base with the humeral one, in one example obsolete), and a median patch on each (more or less transverse in shape, and varying greatly in size—sometimes extending nearly to the suture, and connected by a narrow line with the scutellar marking, and sometimes entirely obsolete), and the eyes, piceous or black. Head with exceedingly minute scattered

punctures, and a setiferous impression behind each eye, the latter small; antennæ testaceous, rather short, the apical joint in the male about equal to joints 7–10, in the female 8–10, united; prothorax about as long as broad (in some examples shorter), the sides obsoletely margined, rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin very little raised, and at the sides grooved within, the surface smooth, or with exceedingly minute scattered punctures; elytra with long and rather shallow intrahumeral depression, widest beyond the middle, finely punctate-striate (in some examples subcrenately so), the interstices flat, but becoming convex towards the apex, the first with one or two (near the apex, sometimes obsolete), the third with about four (between the middle and apex), the fifth sometimes with one or two (towards the apex), the seventh with one (at the shoulder), and the ninth with three or four (at the apex), fine setiferous punctures, the apices obtuse; beneath testaceous, the venter in dark-coloured examples piceous; legs entirely testaceous.

Length $5\frac{1}{3}$–8 millim.; breadth (at shoulders) $1\frac{1}{2}$–$2\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Ventanas in Durango (*Forrer*, *Höge*), La Venta in Guerrero (*H. H. Smith*), Chilpancingo, Acapulco, Jalapa (*Höge*), Cuernavaca (*Sallé*, *Höge*), El Camaron (*Sallé*).

Var. The elytra (the epipleuræ excepted) piceous, the suture sometimes a little lighter.

Hab. Mexico, Cuernavaca (*Sallé*, *Höge*). Four examples.

This species is widely distributed and not uncommon in various parts of Mexico. It varies a great deal in the coloration of the elytra, but in the typical form the shoulders are always piceous; in some examples the entire base is black or piceous, and the median patch on each elytron large in size; in the variety the elytra are piceous. The typical form of *S. evanescens* approaches *S. pulchella*, *S. nigromaculata*, &c., but it may be distinguished by the differently-arranged elytral markings, obsoletely margined thorax, and other particulars noted above. It also varies considerably in size. The variety resembles *S. vilis*, from which it may be distinguished by its almost smooth head and thorax and other particulars.

49. **Statira verærucis.** (Tab. II. fig. 13, ♀.)

Moderately elongate, subopaque, reddish-testaceous; the elytra slightly shining, testaceous, each with a piceous lateral stripe (sinuous on its inner edge) extending from immediately below the shoulder to a little beyond the middle and there directed inwards. Head rugosely punctured; the eyes small, black; antennæ rather short, testaceous, the apical joint (♀) equalling joints 8–10 united; prothorax broader than long, not very convex, the sides obsoletely margined, gradually and obliquely converging anteriorly, and strongly and abruptly constricted behind, the anterior angles rather prominent, the hind angles acute, the basal margin very little raised, and at the sides grooved within, the disc slightly flattened behind, the surface densely scabrous and opaque; elytra with shallow intrahumeral depression, widest beyond the middle, finely but rather deeply punctate-striate, the interstices flat on the disc and at the apex, a little convex towards the sides, the first with one (near the apex), the third with six and the fifth with four (widely scattered between the base and apex), the seventh with one (at the shoulder), and the ninth with four (towards the apex), fine setiferous punctures, the apices obtuse; beneath and the legs entirely testaceous.

Length 8 millim.; breadth 2 millim. (♀.)

Hab. Mexico, Cordova (*Höge*).

One female example only. This species is allied to *S. evanescens*, but may be at once separated from it by the scabrous and less convex thorax, rugose head, different elytral markings, &c.

50. **Statira costaricensis.**

Moderately elongate, shining, reddish-testaceous; each elytron with an oblique angulated marking below the base, an irregular spot about the middle, and an oblique interrupted angular marking beyond the middle, piceous. Head comparatively broad, smooth, and with a setiferous impression behind each eye; the latter small, black; antennæ rather slender, moderately long, testaceous (the apical joint missing); prothorax about as long as broad, transversely convex, the sides immarginate, moderately rounded in front, and strongly constricted behind, the hind angles acute and very prominent, the basal margin sharply raised, the disc shallowly impressed in the middle behind, the surface quite smooth; elytra with long and rather deep intrahumeral depression, finely and very shallowly punctate-striate, the interstices almost flat throughout, the first with one or two (near the apex), the third with three or four (between the middle and apex), the fifth with about four (widely scattered between the base and apex), the seventh with one (at the shoulder), and the ninth with three or four (near the apex), fine setiferous punctures, the apices obtuse; beneath and the legs testaceous.

Length $8\frac{1}{2}$ millim.; breadth $2\frac{1}{3}$ millim. (♀.)

Hab. Costa Rica, Rio Sucio (*Rogers*).

One female example, badly mutilated. *S. costaricensis* is not closely allied to any other species here enumerated; it approaches *S. pulchella*.

51. **Statira picta.** (Tab. II. fig. 14, ♀.)

Moderately elongate, slightly shining, testaceous; the elytra each with a narrow stripe extending from the shoulder to a little below the middle and there connected with a transverse angulated band (the latter not reaching the suture), or with the lateral stripe narrower and shorter (almost obliterated in one example) and a small transverse marking on each, piceous or fuscous. Head with a few exceedingly minute scattered punctures, and a setiferous impression behind each eye, the latter small; antennæ testaceous or ferruginous, the apical joint in the male about equalling joints 7–10, in the female 8–10, united; prothorax convex, about as long as broad, the sides immarginate, rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin very little raised, the surface with exceedingly minute scattered punctures; elytra with shallow intrahumeral depression, widest about the middle, very shallowly and finely punctate-striate, the interstices flat throughout, the first with one or two (near the apex), the third with five or six (scattered between the base and apex), the fifth with two (towards the apex), the seventh with one (at the shoulder), and the ninth with three or four (towards the apex), fine setiferous punctures, the apices obtuse; legs and under surface testaceous.

Length $5\frac{1}{3}$–$6\frac{1}{2}$ millim.; breadth (at shoulders) $1\frac{1}{3}$–$1\frac{1}{2}$ millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Janson*); Panama, Volcan de Chiriqui, David (*Champion*).

Three specimens only. This is the smallest of the species allied to *S. evanescens* &c. inhabiting Central America. The example with best-defined elytral markings (from Nicaragua) resembles *S. veræcrucis*, from which its small size, almost smooth and immarginate thorax, and smooth head distinguish it. The flat apical interstices of the elytra and other characters mentioned above separate it from *S. nigromaculata*.

52. **Statira albolineata.** (Tab. II. fig. 15, ♂.)

Elongate, slightly shining; the head piceous- or reddish-brown; the prothorax yellowish-white, with a large, oblong, purplish-brown patch on each side of the disc about the middle; the elytra of a dilute brownish colour, or brownish-testaceous, the fifth interstice and the epipleuræ white or yellowish-white throughout. Head with a few setiferous punctures behind, for the rest almost smooth, shallowly, longitudinally grooved in the middle between the eyes, the latter large and rather narrowly separated, antennæ

long and rather slender, ferruginous, the basal three joints sometimes darker—the apical joint in the male about as long as joints 8–10 united, the penultimate joints elongate; prothorax cylindrical, longer than broad, the sides completely immarginate, feebly rounded anteriorly, and moderately constricted behind, the hind angles prominent, the basal margin raised, the oblong purplish-brown patch on each side of the disc coarsely and rugosely punctured, the base and the sides with coarse scattered punctures, the middle of the disc and a narrow space within the apical margin almost smooth; elytra with very shallow intrahumeral depression, long, coarsely crenate-striate, the interstices convex, the fifth costate, considerably broader than either of the others, and white or yellowish-white in colour, the first and third with a scattered row of very shallow setiferous punctures extending from the base to the apex, and the ninth also with a few towards the apex, the apices obtuse; beneath testaceous, more or less stained with piceous, the sides of the metasternum coarsely punctured, the venter almost smooth; legs long, rather slender, yellowish-white, the apices of the tibiæ and the tarsi towards the apex slightly stained with piceous, the femora smooth and glabrous, the tibiæ, within and without, and the tarsi, sparsely clothed with long suberect hairs.

Length 8–9 millim.; breadth 2–2⅓ millim. (♂.)

Hab. Mexico, Tuxtla (*Sallé*); Nicaragua, Chontales (*Janson*).

Two examples only, both males. This species has quite a different facies from any other *Statira* known to me. In the fifth elytral interstice being costate and broader and lighter in colour than either of the others, *S. albolineata* somewhat resembles certain species of *Diabrotica*. The thorax has a large, oblong, purplish-brown rugose patch on each side. The elytra are coarsely crenate-striate, with convex interstices. The example from Tuxtla is figured.

53. **Statira corrosa.**

Moderately elongate, shining, thickly clothed with short erect hairs; the head piceous, testaceous in front, the prothorax reddish-testaceous, the elytra obscure violaceous or bluish-black. Head coarsely punctured; the eyes somewhat convex, moderately large; antennæ piceous or piceo-ferruginous (the basal joint sometimes lighter), moderately stout, very long (fully reaching to the middle of the elytra) in the male, shorter in the female, the apical joint in the male nearly as long as joints 7–10, in the female less than 8–10, united; prothorax convex, about as long as broad, the sides immarginate, rounded anteriorly, and moderately constricted behind, the hind angles moderately prominent, the basal margin rather sharply raised, the surface very coarsely, deeply, and rather closely punctured; elytra with shallow intrahumeral depression, moderately long, finely punctate-striate, the interstices flat to beyond the middle, convex at the apex, and finely, shallowly, and irregularly punctured (more sparsely so towards the apex), the apices obtuse; beneath varying in colour, sometimes with the venter and part of the head piceous and the rest reddish-testaceous, and sometimes the under surface of the prothorax alone of the latter colour, shining, the venter thickly punctured; legs clothed on all sides with long erect hairs, rather slender, varying in colour, wholly piceous or piceo-ferruginous, or reddish-testaceous, with the knees, the apices of the tibiæ, and the tarsi piceous.

Length 6–8 millim.; breadth 1⅔–2¼ millim. (♂ ♀.)

Hab. Guatemala, Yzabal (*Sallé*), Capetillo (*Champion*). Four examples.

Var. α. The elytra with the apical third and the epipleuræ testaceous, the suture from the base to beyond the middle fuscous; the legs reddish-testaceous.

Hab. Guatemala, Cerro Zunil (*Champion*). One male example.

Var. β. The elytra with the suture throughout, a band extending from the shoulder almost to the apex, and

the epipleuræ, yellowish-testaceous; the legs fusco-piceous, the basal two thirds of the femora reddish-testaceous.

Hab. GUATEMALA (*Sallé*). One female example.

Var. γ. Above and beneath testaceous, the head piceous-brown, the prothorax, legs, and antennæ (except towards the apex) reddish-testaceous.

Hab. GUATEMALA, Las Mercedes (*Champion*). One male example.

This species varies very much in size and colour. It is chiefly distinguished from its allies by its coarsely punctured head and thorax, long antennæ in the male, thickly and confusedly punctured elytral interstices, and hairy legs. *S. corrosa* in its elytral sculpture and hairy legs resembles *S. brevipilis*; but it differs from that species in its less elongate shape, more prominent eyes, more slender antennæ, shorter thorax, different colour, &c.

54. **Statira horrida.** (Tab. II. fig. 16, ♀.)

Elongate, rather convex, subopaque, blackish-violaceous, the prothorax reddish-testaceous, the body above and beneath thickly clothed with moderately long erect ashy hairs. Head coarsely and rugosely punctured, shallowly grooved on each side between the eyes anteriorly, the latter moderately large; antennæ rather stout, moderately long, piceous, the apical joint (♀) not so long as joints 8–10 united; prothorax convex, about as long as broad, the sides immarginate, rounded anteriorly, and strongly constricted behind, the hind angles moderately prominent, the basal margin grooved within, the surface coarsely and rather closely punctured; elytra with very shallow intrahumeral depression, rather long, subparallel to beyond the middle, very coarsely and deeply punctate-striate, the punctures very closely packed and strongly transverse to beyond the middle and thence to the apex crenate, the interstices quite narrow, moderately convex to about the middle, strongly so beyond, and finely and confusedly punctured, the apices obtuse; beneath piceous, shining, somewhat thickly punctured; legs rather long, piceous, thickly clothed with long erect ashy hairs.

Length 7½ millim.; breadth 2 millim. (♀.)

Hab. GUATEMALA, Panzos in Vera Paz (*Champion*).

A single female example, captured by myself in the lower part of the Polochic valley. *S. horrida* resembles *S. corrosa*, the head and thorax being somewhat similarly shaped and punctured, but differs greatly in the sculpture of the elytra and also in the upper and under surfaces and legs being much more thickly clothed with long erect hairs. The rows of punctures on the basal half of the elytra are closely packed and very strongly transverse, and the interstices in consequence quite narrow, the latter being confusedly punctured.

55. **Statira punctatissima.**

Moderately elongate, rather dull, brownish-piceous, thickly clothed with short erect hairs, the prothorax and the front of the head testaceous, the elytra subopaque and with the shoulders and the suture (narrowly) testaceous. Head coarsely and closely punctured, the eyes moderately large; antennæ (♂) long, fusco-ferruginous, the basal joint testaceous, the apical joint nearly as long as joints 7–10 united; prothorax convex, about as long as broad, the sides immarginate, rounded anteriorly, and strongly constricted behind, the hind angles moderately prominent, the basal margin raised, the surface very coarsely, deeply,

and rather closely punctured, a longitudinal space on the middle of the disc smooth; elytra with shallow intrahumeral depression, moderately long, finely punctate-striate, the punctures closely packed and deep, the interstices flat at the base, rather convex at the apex, and very closely and confusedly punctured throughout, the apices obtuse; beneath thickly punctured, testaceous, the venter piceous; legs comparatively slender, thickly clothed on all sides with rather long erect hairs, testaceous, the knees stained with piceous.

Length 6 millim.; breadth $1\frac{1}{2}$ millim. (♂.)

Hab. Mexico, Tapachula in Chiapas (*Höge*).

A single male example, captured on the lower part of the South Mexican Pacific slope. This species is closely allied to *S. corrosa*, but may be identified by its less shining surface and the very thickly and more distinctly punctured elytral interstices. From *S. horrida* the much more finely punctured elytral striæ (the punctures similar in shape throughout and not strongly transverse on the basal half) sufficiently distinguish it.

56. **Statira brevipilis.**

Elongate, narrow, nigro-æneous, shining, the elytra dark cyaneous (in one example piceous-brown with a cyaneous lustre), the surface clothed with short erect hairs. Head very coarsely punctured, the eyes small; antennæ piceous, very stout, rather long—the apical joint in the male longer, in the female shorter, than joints 8–10 united; prothorax longer than broad, cylindrical, the sides immarginate, only a little rounded anteriorly, and feebly constricted behind, the hind angles moderately prominent, the basal margin very little raised, the surface very coarsely and deeply punctured, the punctures more scattered on the disc; elytra with rather shallow intrahumeral depression, long, coarsely and deeply punctate-striate throughout, the interstices almost flat and coarsely and thickly punctured (two or three very irregular rows on each), the punctures finer than those of the striæ and rather shallow, the apices obtuse; beneath black or piceous, shining, very sparsely and coarsely punctured, the punctures each bearing a short suberect hair; legs piceous or piceo-ferruginous, roughly punctured, and somewhat thickly clothed with rather long suberect hairs.

Length $7\frac{1}{2}$–$8\frac{1}{2}$ millim.; breadth $1\frac{3}{4}$–$2\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*).

Four examples, two of each sex. A narrow, elongate species, blackish-æneous in colour and shining; the elytra dark cyaneous, coarsely punctate-striate, and with the interstices coarsely and thickly punctured, the punctures each bearing a short erect hair; the head and thorax very coarsely punctured, the latter immarginate at the sides; the eyes small; and the legs roughly punctured and pilose.

57. **Statira villosa.**

Closely allied to *S. brevipilis* and differing as follows:—The antennæ not so stout; the prothorax more sparsely and still more irregularly punctured; the elytra dark cyaneous, the interstices each with a very irregular row of coarse (but shallow) closely placed punctures, the punctures each bearing a moderately long erect hair; the femora and tibiæ thickly clothed with long erect hairs.

Length 9 millim.; breadth $2\frac{1}{4}$ millim. (♀.)

Hab. Mexico, Iguala in Guerrero (*Höge*).

A single female example. *S. villosa* differs from *S. brevipilis* thus:—The body and legs are clothed with much longer hairs, and the elytral interstices (instead of being

thickly punctured) have each a very irregular row of closely placed rather shallow setiferous impressions.

58. **Statira nigripennis.** (Tab. II. figg. 17 ♂ ; 18 ♀, vars.)

Statira nigripennis, Mäkl. Act. Soc. Fenn. x. p. 641 [1].

Var. α. The antennæ (except towards the apex), the shoulders of the elytra, the legs, and the under surface (except the venter) reddish-testaceous.

Statira humeralis, Mäkl. loc. cit. p. 642 [2].

Var. β. The reddish-testaceous patch at the shoulders connected by a narrow lateral stripe with a similarly coloured apical patch ; the rest as in α. (Fig. 17.)

Var. γ. The elytra testaceous, the suture for three-fourths of its length, rather broadly, and a long sublateral stripe about the middle, piceous-brown ; the rest as in α. (Fig. 18.)

Var. δ. The elytra wholly testaceous ; the rest as in α.

Statira affinis, Mäkl. loc. cit. p. 642 [3].

Hab. Mexico [1 2 3] (*coll. F. Bates*), Cuernavaca in Morelos (*Sallé*, *Höge*).

We have received specimens of all the forms (except δ) of this variable species from Cuernavaca, not only from M. Sallé but also from Herr Höge. *S. nigripennis* is distinguished from the allied species by its narrow and very elongate shape, shining hairy surface, black or piceous head, reddish thorax, and (in the typical form) bluish-black or nigro-æneous elytra. The head is comparatively narrow (and owing to the long and prominent labrum appears very elongate), and has a few coarse setiferous punctures between the eyes and at the base ; the eyes are rather small and oblique ; and the antennæ are rather long, and have the apical joint in the male longer, in the female shorter, than joints 8–10 united. The thorax is convex, rather longer than broad, immarginate laterally, and has (except on the middle of the disc) a few scattered coarse punctures. The elytra are long, and finely and rather deeply punctate-striate ; the interstices are flat at the base but become convex towards the apex, and each has an irregular row of rather closely placed setiferous impressions extending from the base to the apex. The femora and tibiæ on all sides are clothed with long scattered erect hairs.

In the Sallé collection *S. nigripennis* is separated into five species, though all are from the same locality and differ in nothing except colour. *S. nigripennis* varies from 7–9 millim. in length and from $1\frac{2}{3}$–$2\frac{1}{4}$ millim. in breadth.

59. **Statira nigroænea.** (Tab. II. fig. 19, ♂, var.)

Elongate, narrow, nigro-æneous, shining, the surface clothed with moderately long erect hairs. Head with scattered very coarse punctures, the eyes moderately large ; antennæ not very stout, piceous, the apical joint in the male longer, in the female less, than joints 8–10 united ; prothorax convex, about as long as broad, the sides immarginate (or obsoletely margined at the extreme base), rounded anteriorly, and moderately constricted behind, the hind angles not very prominent, the basal margin very little raised, the disc sometimes a little depressed in the middle before the base, the surface with very coarse widely

scattered punctures; elytra with rather shallow intrahumeral depression, long, very coarsely and closely punctate-striate, the interstices flat, but becoming very convex towards the apex, each with an irregular row of coarse setiferous impressions (coarser than the punctures of the striæ), the apices obtuse; legs piceous, the femora and tibiæ clothed with moderately long erect hairs.

Length 7–9½ millim.; breadth 1¾–2½ millim. (♀.)

Hab. MEXICO, Ventanas in Durango (*Höge*).

Var. α. The two basal joints of the antennæ, the prothorax, the under surface (except the venter), and the basal two-thirds of the femora and of the tibiæ reddish-testaceous. (♂.)

Hab. MEXICO, Ventanas in Durango (*Höge*).

Var. β. The elytra each with a broad stripe from the shoulder to the apex and the epipleuræ testaceous; the rest as in α. (♂.) (Fig. 19.)

Hab. MEXICO, Ventanas in Durango (*Höge*).

Three female examples of the type, and a male of each of the varieties. The coarser and very much deeper punctuation of the elytra (especially of the interstices) and their nigro-æneous colour readily distinguish this species from *S. brevipilis* and *S. villosa*. The thorax is more sparsely punctured, the antennæ more slender, and the eyes larger than in *S. brevipilis*, and the elytral interstices have one row of coarse setiferous impressions only. The punctures of the elytral interstices are much coarser and deeper (compared with those of the striæ) than in *S. villosa*, though they are similarly arranged. *S. setigera* is another closely allied and similarly-coloured species. The var. α resembles *S. nigripennis*, Mäkl., but differs from it in the punctures of the head and thorax being coarser and much more numerous and those of the elytral striæ and interstices much coarser and deeper.

60. **Statira setigera.**

Elongate, narrow, parallel, piceous-black, shining, the elytra nigro-æneous. Head comparatively broad, with some fine widely scattered punctures and three coarse widely separated setiferous impressions on each side close to the inner margin of the eyes, the latter (♂) small, the comparatively broad space behind them with numerous coarse setiferous punctures; antennæ moderately long, stout, brownish-piceous—the apical joint (♂) the length of joints 8–10 united, 10 much longer than broad; prothorax convex, longer than broad, the sides immarginate, arcuate anteriorly, and strongly constricted behind, the hind angles prominent, the basal margin moderately raised but scarcely grooved within, the surface with a few very coarse punctures towards the sides posteriorly and for the rest smooth; elytra with shallow intrahumeral depression, long and parallel, shallowly striate, the striæ with closely placed rather coarse punctures which become finer towards the apex, the interstices flat, each with an irregular row of closely placed moderately coarse setiferous punctures extending from the base to the apex, those on the second and the eighth interstice more scattered and much fewer in number, the apices obtuse; beneath brownish-black, very shining, the ventral segments each with three or four setiferous punctures only on each side; legs rather slender, piceous, the femora and tibiæ clothed on all sides with long erect scattered hairs.

Length 9½ millim.; breadth 2¼ millim. (♂.)

Hab. MEXICO, Guanajuato (*Sallé*).

One male example. In having all the elytral interstices furnished with setiferous

punctures, the femora and tibiæ on all sides with erect setæ, and the thorax immarginate laterally, this species approaches *S. cribrata*; it differs, however, in its nigro-æneous colour, quite small eyes, shorter and stouter antennæ (the apical joint much less elongate in the male), more coarsely punctured elytra, &c. The head and thorax are similarly, but more sparsely punctured than in *S. cribrata*; and the ventral segments have only three or four setiferous punctures on each side. The very much smoother head and thorax, and the flat interstices and much more finely and shallowly punctate-striate elytra distinguish *S. setigera* from *S. nigroænea*, to which it is in other respects closely allied.

61. **Statira cribrata.** (Tab. II. fig. 20, ♂.)

Very elongate, depressed, varying in colour from brownish-piceous to obscure testaceous, the elytra of a translucent æneous tint, shining. Head with very coarse scattered setiferous punctures, the epistoma and labrum also with a few coarse punctures; eyes large, smaller in the female; antennæ long and rather stout, more or less ferruginous—the apical joint in the male about as long as joints 7–9 united (8–10 rather elongate, decreasing in length outwardly, 10 shorter than 9 but much longer than broad), in the female as long as 7 and 8 united; prothorax about as long as or rather longer than broad, the sides immarginate, moderately rounded anteriorly, and constricted behind, the hind angles not acute though rather prominent, the basal margin raised and shallowly grooved within, the surface with very coarse and deep widely scattered setiferous punctures; elytra with shallow intrahumeral depression, long and depressed, subparallel to the middle, finely and very closely punctate-striate, the interstices flat or feebly convex, each with a row of closely and irregularly placed fine setiferous punctures extending from the base to the apex, the apices rather obtuse; the entire under surface (the middle of the metasternum excepted) with scattered coarse setiferous punctures, and varying in colour from brownish-piceous to testaceous; legs long and slender, varying from brownish-piceous to testaceous, the femora and tibiæ on all sides clothed with long hairs.

Length 8–10⅓ millim.; breadth 2¼–3 millim. (♂ ♀.)

Hab. GUATEMALA, near the city (*Salvin*), Dueñas (*Salvin*, *Champion*), Calderas 7000 feet (*Champion*).

Seven examples, four males and three females. A very distinct species, and easily recognized by the upper and under surfaces and the femora and tibiæ on all sides being rather thickly clothed with long erect hairs; the head and thorax bear very coarse and deep scattered punctures, and the elytral interstices each a row of fine and rather closely (but irregularly) placed setiferous impressions; the ventral segments (instead of having, as usual, a few setiferous punctures on each side) have punctures scattered over the greater part of their surface.

62. **Statira ciliata.** (Tab. II. fig. 21, ♂.)

Very elongate, depressed, dull reddish-castaneous; the elytra shining, bright greenish-æneous with golden and cupreous tints towards the sides, the suture very narrowly castaneous. Head with a few (two only on each side between the eyes and a few behind) very coarse and very deep punctures, the epistoma and labrum with a few fine ones; eyes (♂) comparatively small, widely separated; antennæ very long, rather slender, ferruginous—the apical joint in the male the length of joints 7–9 united, 8 and 9 long and subequal, 10 shorter than 9 but much longer than broad; prothorax moderately convex, about as long as broad, the sides narrowly margined towards the base, much rounded anteriorly, and strongly constricted

behind, the hind angles not acute but prominent, the basal margin raised and shallowly grooved within, the sides with scattered coarse deep punctures (much finer than those on the head), the basilar groove rather closely punctured, the disc impunctate; elytra with shallow intrahumeral depression, very long, subparallel to beyond the middle, depressed on the disc, very closely and finely punctate-striate, the punctures not quite extending to the apex, the interstices flat, the first, third, fifth, seventh, and ninth wider and each with a row of closely and irregularly placed setiferous punctures (the third with two irregular rows) extending from the base to the apex, the punctures coarse and deep on the seventh and ninth and fine and shallow on the other interstices, the apices rather obtuse; the entire under surface (the middle of the metasternum excepted) with somewhat closely placed coarse setiferous punctures; legs long and slender, ferruginous, the femora and tibiæ clothed on all sides with long hairs.

Length 10 millim.; breadth $2\frac{3}{4}$ millim. (♂.)

Hab. GUATEMALA, San Gerónimo 3000 feet (*Champion*).

A single male example. This species is allied to *S. cribrata*. It differs from it in having the alternate elytral interstices only with setiferous punctures, those on the two outer interstices being very coarse and deep; and the head and thorax subopaque and with fewer punctures (those on the head much coarser and very few in number), the disc of the latter being impunctate. As in *S. cribrata* the upper and under surfaces and the femora and tibiæ on all sides are rather thickly clothed with long erect hairs.

63. **Statira pilipes.** (Tab. II. fig. 22, ♀.)

Moderately elongate, depressed, piceo-testaceous, shining, the elytra with a translucent purplish tinge which changes to greenish-æneous at the base. Head closely, coarsely, and deeply punctured posteriorly and between the eyes, the latter (♀) small and widely separated; antennæ (♀) ferruginous, long and slender —the apical joint not so long as joints 8–10 united, the latter elongate; prothorax about as long as broad, the sides immarginate, a little rounded about the middle, almost straight in front, and moderately constricted behind, the hind angles acute, the basal margin moderately raised, the entire surface coarsely, deeply and closely punctured, the punctures separate one from another; elytra with shallow intrahumeral depression, rather broad, comparatively short, widest beyond the middle, crenate-striate, the punctures approximate and transverse from the base to about the middle, the interstices moderately convex throughout, the first, third, fifth, seventh, and ninth each with a very irregular row of closely placed setiferous punctures extending from the base to the apex, the apices obtuse; legs slender, obscure testaceous, the femora and tibiæ on all sides, and the tarsi above, somewhat thickly clothed with long erect hairs.

Length $7\frac{1}{2}$ millim.; breadth (at shoulders) 2 millim. (♀.)

Hab. MEXICO, Tapachula in Chiapas (*Höge*).

This species is not closely allied to any other described here. Its chief characters are:—The long and slender antennæ; the coarsely and deeply punctured head and thorax (the punctures quite separate one from another), the latter immarginate; the depressed and comparatively short elytra, with crenate striæ and convex interstices, the alternate interstices each with an irregular row of closely placed setiferous punctures; and the femora and tibiæ clothed on all sides with long erect hairs. *S. pilipes* approaches *S. ciliata* and *S. cribrata* in many of its characters.

64. **Statira marmorata.** (Tab. II. fig. 23, ♂.)

Elongate, opaque, testaceous, the head and prothorax more or less suffused, and the elytra irregularly mottled,

with piceous or brown, the latter shining. Head irregularly punctured and with a few scattered coarse setiferous impressions, the eyes moderately large; antennæ ferruginous or testaceous, rather long and slender—the apical joint in the male the length of joints 8–10 (these latter elongate), in the female 8 and 9, united; prothorax convex, about as long as broad, the sides obsoletely margined towards the base, rounded anteriorly, and moderately constricted behind, the hind angles subacute, the basal margin very little raised, the surface rather uneven and subcoriaceous and with scattered very coarse setiferous impressions, the interspaces usually with some finer punctures; elytra with shallow intrahumeral depression, long, finely and closely punctate-striate, the interstices flat, the first, third, fifth, seventh, and ninth each with a row of rather closely placed setiferous punctures, the apices obtuse; beneath testaceous, shining; legs long and slender, testaceous, the femora and tibiæ on all sides clothed with long erect hairs.

Length $5\frac{3}{4}$–9 millim.; breadth (at shoulders) $1\frac{1}{2}$–$2\frac{1}{3}$ millim. (♂ ♀.)

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, Cerro Zunil (*Champion*).

Found in abundance by Herr Höge, sparingly by myself. This species is allied to *S. cribrata* and *S. ciliata*, but, apart from colour-differences, abundantly distinct. In all the specimens received the elytra are testaceous and mottled to a greater or less extent with piceous.

65. **Statira microps.** (Tab. II. fig. 24, ♂.)

Moderately elongate, testaceous, shining. Head with widely scattered shallow setiferous impressions, the space between the eyes also closely and minutely punctured, the eyes black, very small and convex, and distant from the base; antennæ testaceous or fusco-testaceous, long, moderately stout—the apical joint in the male a little longer than joints 9 and 10 united (the latter elongate), not shorter in the female; prothorax convex, about as long as or rather longer than broad, the sides immarginate, rounded anteriorly, and strongly constricted behind, the hind angles prominent but not very sharp, the basal margin moderately raised and rather thick, the surface almost smooth (when viewed under a strong lens very minute punctures are visible); elytra with very shallow intrahumeral depression, moderately long, coarsely and deeply punctate-striate for about three-fourths of their length and thence to the apex shallowly so (the punctures transverse in shape on the basal half), the interstices rather convex (flat towards the apex), the first, third, fifth, seventh, and ninth each with an irregular row of somewhat closely placed setiferous punctures, the apices obtuse; legs testaceous, slender, the femora and tibiæ on all sides clothed with very long erect hairs.

Length 6–$8\frac{1}{2}$ millim.; breadth $1\frac{2}{3}$–2 millim. (♂ ♀.)

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*), Tapachula in Chiapas (*Höge*); GUATEMALA, San Isidro, Zapote (*Champion*).

Numerous examples. A shining testaceous species, with very long setæ, quite small eyes, hairy legs, smooth immarginate thorax, and coarsely sculptured elytra, the alternate interstices of which each bear a row of somewhat closely placed setiferous impressions. The elytra are smoother towards the apex, and the head bears scattered shallow setiferous impressions in addition to the usual punctures.

66. **Statira albofasciata.** (Tab. II. fig. 25, ♂.)

Moderately elongate, comparatively convex, shining, violaceous or bluish-black; the prothorax testaceous or reddish-testaceous; the elytra each with a transverse band below the base (broadly widened on the middle of the disc and not reaching the suture), another about the middle (sometimes connected at the suture), and a third (sometimes in the form of a large lateral spot, sometimes meeting at the suture) near the apex,

yellowish-white. Head with a few fine scattered setiferous punctures at the sides and base, for the rest smooth; eyes quite small, transverse, and distant from the base of the head; antennæ moderately stout, varying in colour from piceous to ferruginous, the apical joint often lighter—the latter in both sexes only a little longer than joints 9 and 10 united; prothorax transversely convex, broader than long (sometimes about as long as broad), the sides completely immarginate, much rounded anteriorly, and strongly constricted behind, the hind angles moderately prominent, the basal margin grooved within and raised, the surface quite smooth; elytra with prominent humeral callus, moderately long, widest about the middle, with indistinct rows of minute punctures which become almost obsolete behind, the interstices perfectly flat throughout and each with a very irregular row of closely placed fine setiferous punctures, the apices obtuse; beneath, the prothorax excepted, bluish-black, shining, the basal two-thirds of the venter sometimes reddish-testaceous; legs rather short, bluish-black or violaceous, the femora in some examples with the base, in others entirely (and sometimes the tibiæ at the apex), reddish-testaceous, the femora and tibiæ thickly clothed on all sides with long erect hairs, the tibiæ roughly punctured.

Length $5\frac{1}{3}$–7 millim.; breadth $1\frac{1}{2}$–2 millim. (♂ ♀.)

Hab. Mexico, Playa Vicente, Cordova (*Sallé*), Atoyac in Vera Cruz (*H. H. Smith*); Guatemala, Cahabon (*Champion*); Panama, Bugaba (*Champion*).

Var. The elytra with the yellowish-white bands much more extended, and leaving only the base narrowly (except at the suture), a narrow sinuous transverse band before the middle (not reaching the suture), a broader transverse lateral patch beyond the middle, and the apices, violaceous; the epipleuræ yellowish-white.

Hab. Mexico, Playa Vicente (*Sallé*). One specimen only.

We have lately received numerous examples of this elegant insect from Atoyac, where it appears to be not uncommon. Two specimens only were found in Guatemala, and one in the State of Panama. *S. albofasciata* has much the facies of one or two species of *Lema* inhabiting the same districts. It agrees very closely in many respects with Mäklin's description of *S. trifasciata*, from Colombia. The elytra, however, in the latter are stated to have three black fasciæ which reach the suture and not the lateral margins, a system of coloration not exhibited in any of the varieties of *S. albofasciata*. The Central-American species, moreover, invariably has the apex of the elytra bluish-black. A typical example from Atoyac is figured.

67. **Statira irregularis.** (Tab. II. fig. 26, var.)

Moderately elongate, shining, thickly clothed with erect hairs; the head brassy-black, the prothorax red or reddish-testaceous, the elytra cyaneous or bluish-black. Head with scattered setiferous punctures at the base, sides, and in front, for the rest almost smooth, and shallowly depressed on each side between the eyes anteriorly; the latter transverse, quite small, and distant from the base of the head; antennæ rather stout, black or piceo-ferruginous, the apical joint sometimes lighter—the latter about as long as joints 9 and 10 united, and scarcely longer in the male; prothorax transversely convex, broader than long, the sides immarginate, much rounded, and strongly constricted behind, the hind angles moderately prominent, the basal margin grooved within and raised, the disc (except at the base and apex) very finely and shallowly canaliculate (sometimes very obsoletely, and sometimes rather deeply so in the centre), the surface quite smooth; elytra with prominent shoulders, moderately long, with rows of fine punctures extending to the apex, but more or less interrupted or irregular towards the base, the interstices quite flat throughout, with scattered punctures (similar to those of the striæ) towards the base, and each with a very irregular row of rather closely placed setiferous impressions (many of which are more or less confluent with those of the striæ), the apices obtuse; beneath (the prothorax excepted) brassy-black,

shining; legs rather short, bluish- or brassy-black, the femora more or less reddish-testaceous at the base, the femora and tibiæ on all sides thickly clothed with long, erect hairs, the tibiæ roughly punctured.
Length $5\frac{2}{3}$–$6\frac{1}{3}$ millim.; breadth $1\frac{1}{2}$–$1\frac{7}{8}$ millim. (♂ ♀.)

Hab. GUATEMALA, San Gerónimo 3000 feet (*Champion*).

Var. α. The elytra each with a somewhat oblique yellow or yellowish-white band extending from a little below the shoulder to about one fifth from the apex and there turning off abruptly and obliquely to the lateral margin (broadly interrupted posteriorly in one example); the basal two-thirds of the venter reddish-testaceous. (Fig. 26.)

Hab. GUATEMALA, San Gerónimo (*Champion*).

Var. β. Above and beneath black, the elytra bluish-black.

Hab. GUATEMALA, Chinautla 4100 feet (*Salvin*).

Numerous examples of the type-form and of the var. α were collected together by myself at San Gerónimo: the var. β only differs in having the prothorax black. *S. irregularis* is closely allied to *S. albofasciata*; but, apart from colour-differences, it may be at once distinguished by the more coarsely punctured elytra (the punctures not only of the striæ, but of the interstices also, much deeper and more distinct and continued to the apex) and the (usually) finely canaliculate thorax. The elytra are more or less confusedly punctured towards the base. In one example of the var. α the longitudinal band of the elytra is broadly interrupted posteriorly. The short, transversely convex thorax, very small eyes, less elongate shape, &c. distinguish *S. irregularis* and its allies from the other similarly-coloured species inhabiting Central America*.

68. **Statira lævicollis.** (Tab. III. fig. 1.)

Moderately elongate, shining; the head brassy-black, the prothorax reddish- or flavo-testaceous, the elytra cyaneous or bluish-black, with the suture from a little below the base (or from the middle) to the apex yellowish-white. Head, eyes, antennæ, and prothorax much as in *S. irregularis*; the prothorax with, at most, a short fine impressed line on the middle of the disc (usually obsolete), and the disc impressed in the centre at the base; the elytra with rows of closely packed, rather coarse, punctures placed upon shallow striæ, the punctures extending to the apex, the interstices flat, slightly convex towards the apex, and each with a very irregular row of rather coarse and quite closely placed setiferous punctures (many of which are more or less confluent with those of the striæ) which extend to the apex, the apices obtuse; beneath (the head and prothorax excepted) varying in colour from brassy-black to reddish-testaceous, the venter in light-coloured examples piceous at the apex only; legs rather short, roughly punctured, bluish- or brassy-black, the femora usually more or less (sometimes broadly) testaceous at the base, the femora and tibiæ thickly clothed on all sides with long, erect hairs.
Length $5\frac{1}{2}$–$7\frac{1}{4}$ millim.; breadth $1\frac{1}{2}$–2 millim. (♂ ♀.)

Hab. MEXICO, Colima city, Chilpancingo (*Höge*).

Var. The elytra unicolorous bluish-black.

Hab. MEXICO, Colima city (*Höge*).

* In Mr. F. Bates's collection there is a species of *Statira* closely allied to this labelled *Pedilus sanguinicollis*, Dej. (Dej. Cat. 3rd edit. p. 237), and as from the United States. This insect is possibly of Mexican origin; but in the absence of a more certain locality, it is inadvisable to describe it here.

Many examples of the type and one of the variety were captured by Herr Höge at Colima city, and one only at Chilpancingo. *S. lævicollis* (in the form with unicolorous elytra) much resembles *S. irregularis*; it differs from it, however, in the elytral striæ being more deeply impressed (especially noticeable at the apex) and more coarsely punctured, and the setiferous impressions of the interstices still more numerous and deeper. The prothorax is quite smooth, and sometimes shows traces of a fine impressed line on the middle of the disc. The yellowish-white sutural stripe occupies the first (and sometimes part of the second) elytral interstice. The under surface is sometimes wholly reddish-testaceous, except the head and the apex of the venter.

69. **Statira minima.** (Tab. III. fig. 2, ♀.)

Elongate, narrow, shining; the head black, with a slight brassy tinge, the prothorax red or reddish-testaceous, the elytra piceous-brown. Head with numerous rather coarse setiferous punctures, the eyes small; antennæ black or piceous, stout—the apical joint in the male the length of joints 8–10 united, scarcely shorter in the female; prothorax transverse, strongly so in the female, convex, the sides immarginate, much rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin raised, the surface with exceedingly minute scattered punctures (only visible under a strong lens); elytra with shallow intrahumeral depression, long, subparallel in their basal half, with rows of rather coarse punctures placed upon very shallow striæ, the punctures finer and more scattered and the striæ deeper towards the apex, the interstices flat, feebly convex towards the apex, and each with a very irregular row of scattered setiferous punctures (extending from the base to the apex, and the punctures here and there confluent with those of the striæ), the apices obtuse; beneath in great part piceous, the prothorax more or less reddish-testaceous, the sides of the venter broadly flavous; legs short, piceous, the extreme base of the femora testaceous, the femora and tibiæ on all sides clothed with erect hairs.

Var. The prothorax and entire under surface æneo-piceous, the femora testaceous at the extreme base.

Length $4\frac{1}{2}$–5 millim.; breadth $1\frac{1}{4}$–$1\frac{1}{2}$ millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Janson*); Panama, Bugaba, Volcan de Chiriqui, Caldera, David (*Champion*).

Numerous examples from Chiriqui, one only from Nicaragua. This very small narrow species has much the facies of an *Anthicus*; as in many other *Statiræ*, there are two forms of it, one with the thorax red and the other with the thorax piceous. Allied species inhabit Southern Colombia. The oral organs are formed as in the other species of the genus.

70. **Statira bicolor.** (Tab. III. fig. 3, ♂.)

Moderately elongate, flavo- or reddish-testaceous, shining; the elytra black from about the basal third nearly to the apex, the black band widest at the suture and with its anterior and posterior margins oblique. Head with a few setiferous impressions behind the eyes, and also a few in front, for the rest smooth, depressed on each side between the eyes anteriorly, the latter black, small; antennæ piceous, the basal and the apical one or two joints pallid testaceous, rather long—the apical joint in the male about as long as the five, in the female rather longer than the three, preceding joints united; prothorax transversely convex, broader than long, the sides completely immarginate, much rounded anteriorly, and very strongly constricted behind, the hind angles sharp and prominent, the basal margin grooved within and raised, the surface quite smooth, the disc sometimes obsoletely canaliculate in the middle; elytra with rather deep intra-

humeral depression, moderately long, widest beyond the middle, with rows of fine punctures placed upon very shallow striæ, the punctures not very closely placed, more scattered beyond the middle, and almost obsolete towards the apex, the interstices quite flat throughout, the alternate ones, 1, 3, 5, 7, 9, each with a row of fine scattered setiferous punctures which extend from the base to the apex, the apices obtuse; beneath wholly testaceous, shining; legs moderately long, testaceous, the tibiæ and tarsi piceo-testaceous, the femora glabrous and almost smooth, the tibiæ clothed with very short hairs within.

Length 6–7 millim.; breadth $1\frac{2}{3}$–2 millim. (♂ ♀.)

Hab. Panama, Bugaba 1000 feet (*Champion*).

Four examples, three males and one female. This very distinct species is not closely allied to any other known to me; in size and general shape it approaches *S. albofasciata*, but differs totally in the structure of the antennæ, and also in the legs being almost smooth, and not clothed with long erect hairs.

71. Statira rugicollis.

Elongate, opaque, blackish-brown, the head (in part) and the elytra fusco-castaneous, the latter slightly shining, the oral organs and epistoma reddish-testaceous. Head densely and rugosely (but shallowly) punctured, the punctures longitudinally confluent, the eyes large; antennæ moderately long, stout, ferruginous—the apical joint (♂) as long as joints 6–10 united, the penultimate joint rather short; prothorax about as long as broad, the sides margined from the base to the apex, moderately rounded before the middle, strongly constricted behind, and sinuate-emarginate in front, the anterior angles prominent and projecting laterally but obtuse, the hind angles acute, the basal margin very little raised and not grooved within, the disc flattened posteriorly, the surface very densely and rugosely (but quite shallowly) punctured, the punctures longitudinally or sinuously confluent; elytra with shallow intrahumeral depression, moderately long, subparallel anteriorly, finely and rather closely and deeply punctate-striate, the punctures transverse in shape, the interstices almost flat from the base to the middle, a little convex beyond, the first, third, and fifth each with about twelve (scattered between the base and apex), the seventh with four or five, and the ninth with about eight, rather coarse setiferous punctures, the apices obtuse; legs obscure testaceous, moderately stout, sparsely and roughly punctured, and clothed with very short hairs, the tibiæ towards the apex grooved on their outer edge.

Length 9 millim.; breadth $2\frac{3}{4}$ millim. (♂.)

Hab. Mexico, Jalapa (*Höge*).

One male example. This species may be identified from the allied forms by its rugose head and thorax, the latter having the anterior angles prominent, and a distinct lateral margin from the base to the apex; the tibiæ are shallowly grooved towards the apex on their outer edge; the apical joint of the antennæ in the male is as long as joints 6–10 united. *S. rugicollis* and *S. guatemalensis* have the head and thorax more coarsely sculptured than in any other species of the genus here enumerated.

72. Statira guatemalensis.

Closely resembling *S. rugicollis*, the head and prothorax very similarly shaped and sculptured, but with the anterior angles of the latter not so prominent, and also differing as follows:—The upper surface reddish-brown, the elytra obscure piceo-testaceous; the penultimate joint of the antennæ in the male longer, the apical joint (♂) not equalling joints 6–10 united; the elytra more elongate, the first interstice with two or three (at the apex), the third with eight and the fifth with six (widely scattered between the base and apex), the seventh with one (at the shoulder), and the ninth with from four to six (one at the shoulder

and the others towards the apex), rather coarse setiferous punctures; the tibiæ towards the apex flattened, and very shallowly grooved on their outer edge; the rest as in *S. rugicollis*.

Length 10 millim.; breadth 3 millim. (♂.)

Hab. GUATEMALA, near the city, San Gerónimo (*Champion*).

Two male examples, agreeing precisely with each other. This insect is allied to *S. rugicollis*, but differs in having the setiferous punctures of the alternate elytral interstices very much fewer in number, and one only (at the shoulder) being present on the seventh; the elytra are relatively longer; the ninth and tenth joints of the antennæ (♂) are more elongate; and the tibiæ are more shallowly grooved on their outer edge. *S. guatemalensis* is still more closely allied to *S. nigrosparsa*; but it may be distinguished by its more coarsely scabrous thorax, and by having several more setiferous impressions on the third and fifth elytral interstices, and the tibiæ shallowly grooved on their outer edge.

73. **Statira asperata.** (Tab. III. fig. 4, ♂.)

Moderately elongate, piceous- or reddish-brown, shining. Head with a shallow punctured foveate depression in the middle between the eyes, for the rest smooth, the eyes moderately large; antennæ fusco-ferruginous or ferruginous, stout, comparately short—the apical joint in the male nearly as long as joints 6–10 united (10 as broad as long), but little shorter in the female; prothorax a little longer than broad, convex, the sides obsoletely margined towards the base, rounded anteriorly, and strongly constricted behind, the hind angles acute, the basal margin feebly raised, the surface almost smooth; elytra with long and deep intrahumeral depression, moderately elongate, widest at the middle, and thence to the apex gradually narrowing, finely and shallowly punctate-striate, the interstices almost flat on the basal part of the disc and convex towards the sides and apex, the first, third, fifth, seventh, and ninth with a row of closely placed setiferous punctures which are each preceded by a rather distinct conical elevation, the elevations towards the sides and apex becoming elongate in shape, the apices rather sharp; legs piceo-ferruginous or ferruginous, sparsely pubescent, the tibiæ grooved towards the apex on their outer edge.

Length 6–7⅓ millim.; breadth 2–2½ millim. (♂ ♀.)

Hab. PANAMA, Volcan de Chiriqui, Caldera, San Feliz (*Champion*).—VENEZUELA, Cumana (*coll. F. Bates*).

Four examples. This species is not closely allied to any other here enumerated. Its chief characters are the short and stout antennæ, smooth head and thorax, the former foveate in the middle between the eyes, and the latter almost immarginate, tuberculate and rather ovate elytra, grooved tibiæ, and comparatively short form. The setæ of the body are very long. The femora and tibiæ are quite sparsely clothed with very short decumbent hairs.

74. **Statira multipunctata.** (Tab. III. fig. 5, ♂.)

Elongate, depressed, opaque, reddish-brown, the elytra not quite so dull. Head scabrous, the eyes (♂) small; antennæ long and stout, ferruginous—the apical joint in the male about the length of joints 8–10 united, the latter elongate; prothorax about as long as broad, the sides finely margined from the base to the apex, moderately rounded anteriorly, and strongly and abruptly constricted behind, the hind angles acute and very prominent, the basal margin sharply raised and at the sides shallowly grooved within, the surface finely scabrous; elytra with shallow intrahumeral depression, long and depressed, widest beyond the

middle, finely and closely punctate-striate throughout, the interstices flat towards the base but feebly convex towards the apex, each with a row of closely placed coarse setiferous punctures (the setæ very long) extending from the base to the apex, the apices obtuse; beneath piceous-brown, shining, the ventral segments on each side and the metasternum with numerous setiferous punctures; legs ferruginous or testaceous, the femora and tibiæ roughly and rather closely punctured and clothed on all sides with short hairs, the tibiæ on their outer edge deeply sulcate from the base to the apex.

Length 9–10 millim.; breadth (at shoulders) $2\frac{1}{2}$–3 millim. (♂.)

Hab. Mexico, Cuernavaca (*Sallé*).

Two male examples. In having all the elytral interstices from the base to the apex furnished with closely placed setiferous punctures, *S. multipunctata* approaches *S. cribrata*; but there the comparison ends, the two species not being otherwise closely related. *S. multipunctata* is distinguished from the allied forms by the above-mentioned character, and also by its scabrous head and thorax, the latter with very acute hind angles, hairy and roughly punctured legs, very deeply sulcate tibiæ, and opaque reddish-brown colour.

75. **Statira hirsuta.** (Tab. III. fig. 6, ♂.)

Moderately elongate, rather depressed, clothed with very long erect hairs, opaque, reddish-brown or reddish-testaceous, sometimes suffused (the elytra especially) with piceous, the elytra not quite so dull. Head (including the epistoma) scabrous, the eyes rather small; antennæ more or less ferruginous, rather long and stout—the apical joint in the male a little longer, in the female rather less, than joints 8–10 united; prothorax broader than long, sometimes a little longer, flattened on the disc, the sides feebly margined, strongly rounded anteriorly, and deeply constricted behind, the hind angles very acute, the basal margin moderately raised and at the sides deeply grooved within, the surface densely scabrous; elytra with shallow intrahumeral depression, moderately long, widest beyond the middle, very finely and shallowly punctate-striate, the interstices feebly convex behind and flat towards the base, the alternate ones (1, 3, 5, 7, 9) each with a row of closely placed shallow setiferous punctures (the setæ very long) extending from the base to the apex, the apices obtuse; beneath reddish-brown or reddish-testaceous, very shining; legs moderately stout, varying in colour from piceo-testaceous to testaceous, the apical half of the femora often darker, the femora and tibiæ roughly punctured and clothed on all sides with long suberect hairs, the tibiæ sulcate on their outer edge from the base to the apex.

Length 7–$9\frac{1}{2}$ millim.; breadth (at shoulders) 2–$2\frac{2}{3}$ millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Jalapa, Iguala in Guerrero, Tapachula in Chiapas (*Höge*); Nicaragua, Chontales (*Belt*).

Found in plenty by Herr Höge at Jalapa. A moderately elongate, hirsute, dull reddish-brown or reddish-testaceous species, with the head and thorax scabrous, the latter much rounded at the sides anteriorly and rather depressed on the disc, the elytra very shallowly and finely punctate-striate and with the alternate interstices furnished with numerous setiferous impressions, the legs rough and setose, and the tibiæ sulcate on their outer edge. *S. hirsuta* is less elongate than *S. multipunctata*, and has a shorter thorax and the alternate interstices only of the elytra furnished with setiferous impressions; from *S. sulcicrus* it may be distinguished by its rougher, shorter, and more depressed thorax, more finely and shallowly punctured elytral striæ, less setose body, and less elongate shape.

An immature example (from Mexico), in Mr. F. Bates's collection, labelled *S. apicalis*, Dej., has the apical half of the elytra stained with fuscous. The setæ in this species are very long, not only on the body but on the legs also.

76. **Statira pueblensis.** (Tab. III. fig. 7, ♀.)

Elongate, rather depressed, subparallel, shining, piceous-black, the elytra with an indistinct brassy tint. Head thickly, irregularly, and somewhat coarsely punctured, shallowly foveate in the middle between the eyes, the latter (♀) rather small; antennæ (♀) fusco-ferruginous, darker towards the base, exceedingly stout, moderately long—the apical joint nearly as long as joints 8–10 united, the latter much longer than broad; prothorax rather longer than broad, moderately convex, the sides very finely margined from the base to the apex, a little rounded about the middle, slightly oblique in front, and strongly constricted behind, the hind angles sharp and prominent, the basal margin moderately raised and at the sides shallowly grooved within, the disc shallowly depressed in the middle behind, the surface densely, finely, and irregularly punctured and wrinkled; elytra with indistinct intrahumeral depression, long, subparallel to beyond the middle, a little flattened on the disc, finely punctate-striate, the punctures closely packed and subtransverse, the interstices flat on the basal part of the disc and moderately convex at the sides and towards the apex, the first, third, fifth, seventh, and ninth each with a row of closely placed setiferous punctures which extend from the base to the apex, the apices obtuse; legs stout, fusco-ferruginous, the femora darker, the tibiæ sparsely clothed with short hair within and without and grooved on their outer edge from the base to the apex, the femora on all sides with long scattered hairs.

Length 10¼ millim.; breadth 3 millim. (♀.)

Hab. Mexico, Matamoros Izucar in Puebla (*Höge*).

One female example only. In its very stout antennæ this species approaches *S. crassicornis*, though totally different in other respects. *S. pueblensis* may be separated from the other Central-American *Statiræ* with grooved tibiæ by its stout limbs and more shining surface. *S. tristis*, Mäkl. (according to the description), approaches *S. pueblensis* in many of its characters.

77. **Statira sulcicrus.**

Elongate, rather narrow, subopaque, piceo-castaneous or brownish-piceous, the head, and sometimes the prothorax, redder in colour. Head scabrous, the epistoma smoother, the eyes moderately large and widely separated in both sexes; antennæ fusco-ferruginous, moderately long, rather slender—the apical joint in the male about as long as joints 7–10, in the female 8–10, united; prothorax longer than broad, the sides obsoletely margined from the base to the apex, rounded anteriorly, and moderately constricted behind, the basal margin a little raised, the hind angles acute, the surface very finely scabrous; elytra with very shallow short intrahumeral depression, long, widest a little beyond the middle, finely punctate-striate, the punctures transverse and closely packed, the interstices feebly convex from the base to the middle and more strongly so beyond, the first, third, fifth, seventh, and ninth each with a row of closely placed deep setiferous punctures extending from the base to the apex, the apices slightly produced but obtuse; legs moderately stout, piceous or fusco-ferruginous, the tibiæ grooved on their outer edge from the base to the apex, the femora and tibiæ on all sides clothed with short scattered hairs.

Length 9¼–9½ millim.; breadth 2⅔–2¾ millim. (♂ ♀.)

Hab. Mexico, Chilpancingo in Guerrero (*Höge*).

Duller than *S. pueblensis*; the antennæ not nearly so stout; the head and thorax finely scabrous and opaque, &c. As in *S. pueblensis*, the tibiæ are grooved on their outer edge from the base to the apex, and the alternate elytral interstices have each a row of

closely-placed setiferous impressions. *S. pluripunctata*, Horn, from Arizona, appears to be allied to this species; but, unlike any of the Mexican *Statiræ* with grooved tibiæ, it is stated to have the sides of the thorax without a distinct edge even at the base. Four examples, two of each sex.

78. **Statira rugipes.**

Very elongate, depressed, piceous-black, opaque, the elytra not so dull. Head very irregularly and closely punctured, scabrous between the eyes, the latter large but rather widely separated; antennæ (♀) ferruginous, rather short, moderately stout, the apical joint about as long as joints 8–10 united; prothorax as long as broad, the sides obsoletely margined throughout, moderately rounded anteriorly, and constricted behind, the hind angles rather sharp, the basal margin a little raised, the surface densely and finely scabrous; elytra with shallow intrahumeral depression, very long, finely punctate-striate throughout, the punctures transverse and approximate, the interstices rather convex, except on the basal part of the disc, and the first, third, fifth, seventh, and ninth each with a row of closely placed setiferous punctures extending from the base to the apex, the apices obtuse; beneath piceous-black, shining; legs long, rather slender, piceous, the tarsi ferruginous; the femora and tibiæ roughly punctured, the former on all sides thickly clothed with long, and the tibiæ within with shorter, decumbent hairs; the tibiæ deeply grooved on their outer edge from the base to the apex.

Length 12⅔ millim.; breadth 3½ millim. (♀.)

Hab. Mexico, Ventanas in Durango (*Höge*).

One female example only. Larger and more elongate than *S. sulcicrus*, the elytra relatively much longer, the antennæ considerably stouter than in the corresponding sex of that species, the thorax still more densely scabrous and very opaque, and the femora more roughly punctured.

The narrowly ovate apical joint of the labial palpi and the much longer third joint of the antennæ distinguish *S. rugipes* from either of the species of *Epicydes*.

79. **Statira leptotracheloides.** (Tab. III. fig. 8, ♀.)

Elongate, narrow, subparallel, depressed, subopaque, obscure reddish-testaceous, the elytra testaceous and not so dull. Head scabrous between the eyes, the latter (♀) black and quite small, the comparatively broad space behind them with fine scattered setiferous punctures; antennæ long, moderately slender, testaceous—the apical joint (♀) not so long as joints 8–10 united, the latter elongate; prothorax narrow, subcylindrical, longer than broad, the sides obsoletely margined at the base and apex, moderately rounded anteriorly, and not very strongly constricted behind, the hind angles acute, the basal margin moderately raised and scarcely grooved within, the surface very finely scabrous; scutellum finely punctured; elytra with indistinct intrahumeral depression, long, flattened on the disc, closely, finely, and shallowly punctate-striate, the interstices flat, the first, third, fifth, seventh, and ninth each with a row of closely placed deep setiferous punctures, the apices a little produced but obtuse; beneath reddish-testaceous, slightly shining; legs testaceous, moderately long, the femora and tibiæ sparsely and roughly punctured and clothed on all sides with rather long decumbent hairs, the tibiæ from the base to the apex grooved on their outer edge.

Length 9½ millim.; breadth 2½ millim. (♀.)

Hab. Mexico, Ventanas in Durango (*Höge*).

An immature female example only. Closely allied to *S. sulcicrus*; but differing in

its much smaller eyes (the space behind them being quite broad, instead of narrow as in the same sex of *S. sulcicrus*), longer penultimate joints to the antennæ in the female (the apical joint, comparatively, not so long as in the same sex of *S. sulcicrus*), relatively narrower thorax, and deeper and still more numerous setiferous punctures on the elytral interstices. *S. leptotracheloides*, *S. sulcicrus*, &c., form a small group of species which are chiefly confined to North-west Mexico and the adjacent country beyond the United-States frontier. *S. leptotracheloides* closely resembles *Leptotrachelus punctipennis*, a species of Carabidæ (*cf.* Biol. Centr. Am., Col. i. pt. 1, p. 159, t. vi. fig. 18).

The following species is unknown to me, and owing to the imperfect description it cannot be properly placed in the arrangement here adopted:—

80. **Statira tristis.**

Statira tristis, Mäkl. Act. Soc. Fenn. x. p. 639[1].

Hab. Mexico[1].

I am unable to identify this insect amongst the large number of Mexican *Statiræ* before me. The species representing it in the Sallé collection is *S. nigripennis*, Mäkl. *S. tristis* is described as being very elongate, black, and moderately shining; the antennæ very robust; the prothorax much rounded at the sides anteriorly, with the surface faintly rugulose and very slightly shining; the elytra transversely depressed below the base, and with the alternate interstices seriately punctured. To judge from Mäklin's description, *S. tristis* would appear to have the thorax shaped much as in *S. hirsuta*, i. e. rotundate-dilate anteriorly; the thorax of *S. pueblensis* cannot be thus described. In the structure of the antennæ and in the elytral sculpture (as given by Mäklin), *S. tristis* resembles *S. pueblensis*.

UROPLATOPSIS.

Last joint of the maxillary palpi elongate-triangular, that of the labial palpi narrow and ovate and with its apex truncate; ligula moderately prominent, rounded on each side, and emarginate in the middle in front; mentum trapezoidal, transverse; outer lobe of the maxillæ rather narrow; mandibles simply unidentate at the apex; labrum very large and prominent; antennæ with joints 3–10 large and more or less flattened and dilated, very broadly so in some species, and angularly widened on each side towards their apex, 7 and 8 the widest, 11 very long in both sexes, and usually about half the width of the apex of 10; head narrow, abruptly constricted into a neck behind; eyes convex, small, or only moderately large, somewhat distant from the base of the head; elytra with or without an opaque velvety lateral patch; anterior coxæ strongly exserted, narrowly separated, the prosternum raised between them; metasternal episterna almost unimpressed, and without well-defined groove along the inner margin; tibiæ without distinct spurs.

Numerous species from the southern part of Central America, and one from Tropical South America †, agree well in the above-mentioned characters, and they form a well-defined genus ‡. All these species bear a striking resemblance to certain Lycidæ and Hispidæ, more especially to the latter, and all are exceedingly rare. In one species, *U. mimica*, the elytral sculpture, antennal structure, &c. is here reproduced in a very similar manner to that existing in the genus *Uroplata* and other Hispidæ. The oral organs are formed very much as in *Statira*, though the antennæ exhibit a very different structure. The elytra are sculptured as in many genera of Lycidæ and Hispidæ. *U. appendiculata* possesses a most remarkable sexual development in the male, the hind femora being furnished with a large hollow pouch beneath, and the anterior tibiæ toothed, and the intermediate tibiæ twisted; *U. simulans* is also furnished with well-marked male characters. Two groups of species are indicated, one without, the other with an opaque velvety patch (not interrupting the striæ) on each side of the elytra about the middle. The seven species captured by myself in the State of Panama were found upon leaves in the forest.

* *Elytra without opaque lateral patch.*

1. **Uroplatopsis imitator.** (Tab. III. figg. 9, ♂; 9 *a*, labium; 9 *b*, maxilla and maxillary palpus; 9 *c*, mandible.)

Elongate, clothed with a few scattered erect hairs, opaque; reddish-ochraceous, the eyes, the scutellum, and the suture very narrowly, for a short distance, piceous. Head longitudinally grooved between the eyes,

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† **Uroplatopsis nodosa.**

Elongate, narrow, opaque, brownish-piceous, the head (except the eyes), the prothorax at the sides, the elytra at the shoulders, and a narrow band across the middle and another at the apex of the femora, flavous, the elytra with a perfectly opaque black patch on each side about the middle. Head slightly depressed between the eyes, and with some coarse setiferous impressions between and behind them; antennæ black, the apical joint and the greater part of the second testaceous, joints 3–10 rather broadly flattened and dilated, 7 and 8 the widest, 11 rather longer than 8–10 united; prothorax about as long as broad, the sides immarginate, rounded anteriorly, and abruptly constricted immediately before the base, the disc with three broad transverse smooth elevations on each side, the elevations separated one from another by deep transverse grooves and down the middle by a longitudinal one running from the base to the apex, the basal margin raised, the hind angles prominent, the surface smooth; elytra with smooth humeral callus, long and parallel, rather depressed, with regular rows of deep coarse impressions from the base to the apex, the interstices narrow and raised, the apices obtuse; femora smooth and glabrous; tibiæ clothed on all sides with long erect hairs.

Length 6⅓ millim.; breadth 1½ millim.

Hab. Amazons, Ega (*H. W. Bates*).

A single example of this species, apparently a female, is contained in Mr. F. Bates's collection.

‡ In a closely allied undescribed genus, of which two or three species were captured by Mr. H. W. Bates on the Amazons (these being now contained in his brother's collection), the apical joint of the labial palpi is broad and has its apical side shallowly emarginate, the femora are clavate, and the metasternal episterna have a very deep groove along the whole length of their inner margin. These species have the antennæ formed as in *Uroplatopsis*, and also agree closely in all other respects.

coarsely rugose along the middle, the epistoma smoother, the base with very coarse scattered setiferous impressions, a narrow convex space along each side of the inner margin of the eye and the orbits smooth, the eyes convex; antennæ fusco-ferruginous or fusco-piceous, the basal joints darker, joints 3–10 very broadly flattened and each angularly dilated towards the apex, 7 and 8 the widest, 3 very much narrower and shorter than 4, 11 longer than 8–10 united; prothorax longer than broad, slightly and somewhat obliquely narrowed in front and (if viewed from the side) strongly constricted behind, obsoletely margined at the sides, with a sinuous, smooth, shining, raised space on each side extending from the base to the apex (the true lateral margin placed almost beneath this, and posteriorly scarcely visible from above), the broad space enclosed flat, and, like the sides, very rugosely punctured, the hind angles very prominent, the basal margin broad and much raised; elytra long, rounded at the shoulders, the sides almost straight from a little below the base to beyond the middle, very deeply punctate-striate throughout, the interstices each with a double (the sutural with one) row of very closely-packed granules which extend to the apex, the fifth and ninth nearly to the apex (the fifth sharply), and the seventh at the base, costate and smoother, and closely and transversely notched on each side, the apices each armed with a sharp triangular tooth within; beneath varying in colour from piceous-brown to testaceous, with the venter partly piceous, the sides of the metasternum coarsely punctured; legs piceous-brown or piceo-testaceous, the femora testaceous towards the base, the latter smooth and glabrous, the tibiæ clothed with long hairs.

Length 10 millim.; breadth $2\frac{1}{2}$ millim. (♂.)

Hab. NICARAGUA, Chontales (*Belt*).

Two specimens only. *U. imitator* resembles *U. planicollis*, and has the thorax similarly shaped and sculptured; it differs, however, in its larger size, still more broadly dilated antennæ, the groove between the eyes broader and rugose within, the fifth elytral interstice sharply (the third not) costate, and also in the smooth and glabrous femora.

2. **Uroplatopsis vermiculata.** (Tab. III. fig. 10, ♂.)

Elongate, clothed with a few scattered erect hairs, opaque; reddish-ochraceous, the head in front, the eyes, the neck, a narrow stripe down the middle of the prothorax, the scutellum, the suture for a short distance, and the apical two-fifths of the elytra black or brownish-black. Head with numerous very coarse setiferous punctures, coarsely rugose in front, and grooved in the middle between the eyes, the latter convex; antennæ and prothorax as in *U. imitator*; elytra as in *U. imitator*, but with the double rows of granules of the interstices replaced on the dark-coloured apical portion by crowded minute granular points, the fifth and the ninth interstices nearly to the apex, and the seventh at the base, costate, the apices each armed with a sharp triangular tooth within; beneath more or less piceous at the sides, the venter in part testaceous; legs as in *U. imitator*.

Length 9 millim.; breadth $2\frac{1}{3}$ millim. (♂.)

Hab. NICARAGUA, Chontales (*Belt*).

Two male examples. Rather smaller than *U. imitator*, the thorax with a longitudinal stripe down the middle and the apical two-fifths of the elytra black or brownish-black; the interstices of the dark apical portion of the elytra sculptured in a different manner to the rest of the surface, the double rows of granules being replaced by crowded minute granular points. In this last-mentioned character *U. vermiculata* resembles *U. reticulata*, in which the dark-coloured portion of the elytra is differently sculptured from the rest of the surface, the other species of the genus having the dark-coloured apical portion (when present) sculptured like the paler parts. Apart from the smaller

size, different colour, and the less dilated antennal joints, the smooth and glabrous femora separate *U. vermiculata* from *U. reticulata*.

3. **Uroplatopsis planicollis.**

Elongate, opaque, sparsely clothed with erect hairs; reddish-ochraceous, the head in front, the neck, the eyes and oral organs, a longitudinal stripe down the middle of the prothorax (sometimes indistinct), and the suture of the elytra narrowly, to about the middle, piceous or fuscous. Head deeply longitudinally grooved between the eyes, coarsely rugose in the middle in front, and with numerous coarse deep setiferous punctures, the eyes convex and rather small; antennæ black, joints 3–10 in both sexes broadly flattened and each angularly dilated towards the apex, 3 much shorter and narrower than 4, the intermediate joints the widest—the apical joint in the male about as long as 8–10 united, very little shorter in the female; prothorax rather longer than broad, a little narrowed in front and (if viewed from the side) moderately constricted behind, obsoletely margined at the sides, with a sinuous, smooth, shining, raised space on each side extending from the base to the apex (the true lateral margin placed almost beneath this, and scarcely visible from above), the broad space enclosed flat and very rugosely (but shallowly) punctured, a narrow space within the lateral margin similarly punctured, the hind angles prominent, the basal margin rather broad and much raised; elytra long, rounded at the shoulders, the sides almost straight from a little below the base to beyond the middle, very deeply punctate-striate throughout, the third, fifth, seventh, and ninth interstices narrowly costate nearly to the apex, and very closely and deeply transversely notched on each side, the second, fourth, sixth, and eighth each with a double row of closely-packed granules, the apices each with a short tooth within the angle; beneath varying in colour from piceous to brownish-testaceous, the sides of the metasternum coarsely punctured; legs moderately slender, piceous, the basal half or the middle of the femora more or less testaceous, the femora and tibiæ somewhat thickly clothed with long hairs.

Length 7–8½ millim.; breadth 1¾–2 millim. (♂ ♀.)

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Numerous examples. From *U. mimica* this species may be at once distinguished by the very broadly flattened and rugose disc of the thorax, the more slender and more hairy legs, and the second, fourth, sixth, and eighth elytral interstices in the form of a double row of very closely packed granules, the other interstices being narrowly costate and closely and transversely notched on each side nearly to the apex. The antennæ are similarly formed, but not quite so broadly serrate.

4. **Uroplatopsis reticulata.** (Tab. III. fig. 11, ♀.)

Elongate, subopaque, sparsely clothed with erect hairs; black, the head between and behind the eyes, the sides of the prothorax broadly, and the sides of the elytra from the shoulder to about the middle (but rapidly becoming more narrowly so) flavous, and slightly shining. Head shallowly grooved between the eyes, coarsely rugose in front, and with numerous coarse deep setiferous punctures, the eyes convex and rather small; antennæ black, joints 3–10 in both sexes broadly flattened, and each angularly dilated towards the apex, 3 much shorter and narrower than 4, the intermediate joints the widest—the apical joint in the male about as long as 8–10 united, scarcely shorter in the female; prothorax rather longer than broad, a little narrowed in front and (if viewed from the side) feebly constricted behind, obsoletely margined at the sides, with a sinuous, smooth, shining, raised space on each side extending from the base to the apex (the true lateral margin placed almost beneath this, and scarcely visible from above), the broad space enclosed flattened and very coarsely and deeply rugose and at the sides irregularly depressed, the hind angles rather prominent, the basal margin narrow and moderately raised; elytra long, rounded at the shoulders, the sides almost straight from a little below the base to beyond the middle, very deeply punctate-striate throughout, the fifth, seventh, and ninth interstices narrowly costate for the greater part of their length

and transversely notched on each side, the dark-coloured portion of the others with crowded and irregularly packed granular points, the apices obtuse; beneath piceous, the sides of the metasternum coarsely punctured; legs moderately slender, brownish-piceous, the anterior femora at the base and apex, and the intermediate and posterior pairs at the apex, testaceous, the femora and tibiæ sparsely clothed with long hairs.

Length 6–7½ millim.; breadth 1⅝–1¾ millim. (♂ ♀.)

Hab. PANAMA, Bugaba (*Champion*).

Two examples. *U. reticulata* is closely allied to *U. planicollis*; it differs, however, in the shallowly and indistinctly canaliculate head, the more coarsely rugose thorax, the basal margin of which is narrower and less raised, and in the third elytral interstice not being costate, as well as in colour. The dark-coloured portion of the elytra (instead of having a closely-packed double row of granules on each interstice) is accompanied by a difference of sculpture, the interstices having on this part more irregularly-packed fine granular points.

5. **Uroplatopsis mimica.** (Tab. III. fig. 12, ♂.)

Elongate, subopaque, clothed with scattered erect hairs; black, the head in great part, a broad stripe on each side of the disc of the prothorax extending from the base to the apex (leaving a rather broad longitudinal median stripe, and the sides, narrowly, of the ground-colour), and rather more than the basal half of the elytra (except the suture and epipleuræ) dull reddish-yellow. Head with a long and very deep groove between the eyes and numerous very coarse and deep setiferous punctures, the narrow space on each side behind the eyes and the middle of the front coarsely rugose; eyes convex, moderately large; antennæ black, joint 3 short and not half the width or length of 4, joints 4–10 in both sexes very broadly flattened and each angularly dilated towards the apex, 4–7 increasing and 8–10 decreasing in width, 7 and 8 the widest—the apical joint in the male nearly as long as joints 8–10 united, slightly shorter in the female; prothorax longer than broad, a little narrowed in front, and feebly constricted behind, the sides margined at the base and apex, the basal margin thick and raised, the hind angles prominent but not acute, the disc broadly and longitudinally depressed from the base to the apex and with a very irregular deep oblong depression on each side, the surface very uneven and coarsely, irregularly, and closely punctured, the punctures on the depressed portion of the middle of the disc running into deep transverse or sinuous rugæ; elytra long, rounded at the shoulders, the sides almost straight from a little below the base to beyond the middle, very deeply punctate-striate throughout, the interstices narrow and very closely and deeply transversely notched on each side from the base to the apex, the third, fifth, seventh, and ninth narrowly costate for the greater part of their length, the apices obtuse; beneath piceous-black, the sides of the metasternum coarsely punctured; legs rather stout, piceous, the femora towards the base and the coxæ more or less testaceous, the femora almost smooth, but with a few widely scattered hairs, the tibiæ clothed within and without with rather long hairs.

Length 8–9 millim.; breadth 2¼–2⅓ millim. (♂ ♀.)

Hab. PANAMA, Bugaba 1000 feet (*Champion*).

Four examples. This species bears a most remarkable resemblance to *Uroplata dimidiata*, a species of Hispidæ inhabiting the same locality (*cf.* Biol. Centr. Am., Col. vi. pt. 2, p. 103, t. iv. fig. 13), the colour, structure of the antennæ, elytral sculpture, &c. being reproduced in a very similar manner. The longitudinally grooved and irregularly wrinkled thorax and other particulars described above separate *U. mimica* from the allied species described here.

*** Elytra with an opaque lateral patch on each side about the middle.*

6. **Uroplatopsis simulans.** (Tab. III. fig. 13, ♂.)

Elongate, narrow, subparallel, thickly clothed with erect hairs, the head and prothorax shining, the former piceous, obscurely reddish between the eyes and in front, the latter testaceous, with a broad longitudinal piceous stripe on the middle of the disc extending from the base to the apex; the elytra subopaque, flavous, with a perfectly opaque fulvous lateral patch (small in the female, large and oblong in the male) about the middle, the suture, from the base to about the middle, rather broadly (but becoming more narrowly so posteriorly), and about the apical fifth, fusco-piceous. Head with exceedingly coarse confluent setiferous impressions between and behind the eyes, coarsely punctured in front, the eyes convex and moderately large; antennæ black, joints 3–10 very broadly flattened and each angularly dilated towards the apex, 6–10 very sharply so, 3 the length of but much narrower than 4, 11 nearly as long as 7–10 in both sexes; prothorax longer than broad, a little narrowed in front, and feebly constricted behind, the sides completely immarginate, the hind angles very prominent, the disc deeply canaliculate in the centre anteteriorly and with a very deep <-shaped impression on each side about the middle, the basal margin much raised and preceded by a deep groove extending completely across, the sides and base rather coarsely and irregularly punctured, the disc smooth; elytra very long, subparallel nearly to the apex, the disc flattened, the sides towards the base almost vertical from the sixth row of impressions, the surface with regular rows of deep foveate, very closely placed impressions which extend to the apex, the interstices quite narrow and convex, each with a row of closely placed very fine setiferous punctures extending from the base to the apex, the fifth and seventh towards the base and the ninth towards the apex broader and costate, the apices obtuse; beneath entirely piceous; legs rather long, piceous-brown, the femora towards the base and the coxæ more or less ferruginous, the femora and tibiæ sparsely and rather deeply (the anterior tibiæ thickly) punctured and somewhat thickly clothed on all sides with long hairs.

♂. Anterior tibiæ triangularly widened on the inner side about the middle; intermediate tibiæ bent inwards towards the apex and a little thickened there, the basal portion flattened and opaque within; intermediate and posterior femora deeply grooved along their inner side.

Length $6\frac{2}{3}$ millim.; breadth $1\frac{1}{2}$ millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Two examples. This and the following species differ from the allied Central-American forms, *U. excavata* excepted, in the very peculiar sculpture of the thorax.

7. **Uroplatopsis dilaticornis.**

Closely resembling *U. simulans*:—The head similarly punctured between and behind the eyes, but with the vertex convexly raised and smooth in the middle; the prothorax with the longitudinal stripe on the middle of the disc narrowing and almost obliterated in front, the sides coarsely and rather closely punctured; the elytra with a small perfectly opaque fulvous lateral patch about the centre, the suture broadly fusco-piceous, the fusco-piceous colour rapidly extending outwards from about the middle and towards the apex reaching the lateral margin; the rest as in *U. simulans*.

Length $6\frac{3}{4}$ millim.; breadth $1\frac{1}{2}$ millim. (♀.)

Hab. Panama, Bugaba (*Champion*).

One female example. This insect, at first sight, would appear to be only a colour-variety of *U. simulans*; but the sculpture of the head is so different that it cannot be treated as such. The apical joint of the antennæ is unfortunately broken off.

8. **Uroplatopsis excavata.** (Tab. III. fig. 14, ♀.)

Elongate, narrow, subparallel, thickly clothed with erect hairs; the head and prothorax shining, the head piceous-brown, testaceous between the eyes, the prothorax testaceous, with a broad or moderately broad longitudinal piceous stripe on the middle of the disc extending from the base to the apex; the elytra dull, flavo-testaceous, with a small (in the female) perfectly opaque fulvous lateral patch about the centre, the apical portion from a little below the middle fusco-piceous, this colour extending along the suture and widening out a little towards the base. Head with scattered very coarse setiferous punctures, sparsely and finely punctured in front, shallowly canaliculate between the eyes, the latter convex and moderately large; antennæ black, the apical two-thirds of the last joint flavous, joints 3–10 very broadly flattened, and each angularly dilated towards the apex, 6–10 very sharply so, 3 the length of but narrower than 4, 11 (♀) about as long as 7–10 united; prothorax longer than broad, a little narrowed in front, and feebly constricted behind, the sides completely immarginate, the hind angles prominent, the disc deeply canaliculate in the centre anteriorly and with a very deep <-shaped impression on each side about the middle, the basal margin much raised and preceded by a deep groove extending completely across, the surface with a few widely scattered fine punctures, the disc smooth; elytra very long, subparallel nearly to the apex, the disc flattened, the sides towards the base almost vertical from the sixth row of impressions, the surface with regular rows of deep foveate rounded impressions which extend to the apex, the interstices quite narrow and convex, each with a row of closely placed very fine setiferous punctures extending from the base to the apex, the fifth and seventh towards the base and the ninth towards the apex broader and costate, the apices obtuse; beneath entirely piceous; legs rather long, piceous-brown, the femora and coxæ piceo-testaceous, the femora and tibiæ sparsely and rather deeply punctured and somewhat thickly clothed on all sides with very long hairs.

Length 6½ millim.; breadth 1½ millim. (♀.)

Hab. Panama, Bugaba (*Champion*).

One female example. This species closely resembles *U. simulans*; it differs thus:—The apical joint of the antennæ is in great part flavous; the head is smoother and more sparsely punctured, the coarse deep punctures on the vertex being distant from one another and not confluent; the prothorax is almost smooth at the sides; and the elytra have the foveate impressions coarser, more rounded, and less numerous (owing to their more rounded shape and larger size), and the fusco-piceous apical patch very much larger. From *U. dilaticornis* the smoother sides of the thorax and the larger and less numerous foveate impressions of the elytral series sufficiently distinguish it; the former, moreover, has the apical patch gradually (and not abruptly) narrowing anteriorly and broadly extending along the suture to the base.

9. **Uroplatopsis appendiculata.** (Tab. III. fig. 15, ♂.)

Very elongate, narrow, subparallel, shining, sparsely clothed with long erect hairs, testaceous; the prothorax with a broad longitudinal piceous stripe on the middle of the disc extending from the base to the apex; the elytra flavous, with (in the male) a large, oblong, perfectly opaque, fulvous lateral patch about the middle, and the suture to some little distance below the base indeterminately and rather broadly fuscous. Head shallowly canaliculate between the eyes, and with scattered setiferous punctures at the sides and base, for the rest smooth, the eyes moderately large; antennæ (♂) long and stout, black, the apical joint testaceous, joints 2 and 3 about equal in length, each slightly shorter than 4, 3–10 moderately widened and each angularly dilated towards the apex, 7 and 8 the widest, 11 exceedingly elongate, equal in length to 6–10 united, and much curved; prothorax considerably longer than broad, the sides completely immarginate, feebly rounded, a little narrowed in front, and moderately constricted behind, the hind angles very prominent, the disc with a small shallow fovea on each side before, and a very deep oblique groove on each side behind the middle, the basal margin thick and much raised, and preceded by a deep

groove extending completely across, the space between the two grooves raised and convex, the surface quite smooth; elytra very elongate and narrow, as wide just before the apex as at the base, flattened on the disc, the sides compressed from a little distance below the base to about one fourth from the apex, and towards the base almost vertical from the sixth row of impressions, the surface with regular rows of deep foveate impressions, the impressions becoming finer at the apex and there placed in rather deep striæ, the interstices narrow and rather convex, strongly so at the apex, the fifth costate from a little below the base to about the middle, the seventh costate at the extreme base, the first, third, fifth, seventh, and ninth each with a row of rather closely placed fine setiferous punctures extending from the base to the apex, the humeral callus smooth, the apices obtuse; beneath almost smooth, in great part piceous, the head, prothorax, and coxæ more or less testaceous; legs moderately long, piceous-brown, the basal half of the femora pallid testaceous and almost transparent, the anterior tibiæ finely and roughly punctured towards the apex, the tibiæ and tarsi clothed with very long hairs, the femora glabrous.

♂. Anterior tibiæ triangularly widened on the inner side near the base; anterior femora concave within at the apex; intermediate tibiæ very abruptly bent inwards and thickened from about the middle, the basal half flattened and opaque within; intermediate femora clavate towards the apex, the clavate portion deeply concave beneath; posterior femora on their inner side dilated at about the middle into a long and very broad pouch, the pouch deeply concave within, the apical portion also concave beneath.

Length 6½ millim.; breadth 1½ millim. (♂.)

Hab. Panama, Bugaba (*Champion*).

One male example only. This remarkable insect will be readily identified from our figure. The male exhibits extraordinary sexual characters.

EPICYDES.

Last joint of the maxillary palpi very long, elongate-triangular, its outer side longer than the apical side; last joint of the labial palpi large and broadly widened outwardly, its apical side deeply concave-emarginate; ligula prominent, deeply emarginate in the middle, and broadly rounded on each side in front; mentum large, fully as long as broad at the base, much dilated on each side in front; outer lobe of the maxillæ moderately broad; mandibles simply unidentate at the apex; antennæ very long in both sexes, joint 3 small and very short, in the male only a little longer than, and in the female about twice as long as, 2, 4 three or four (in the male) times as long as 3, 4–10 all very elongate and each very slightly widened towards their inner apical angle, 11 exceedingly long in both sexes; eyes exceedingly large, occupying the whole of the side of the head behind the orbits, above and beneath approximate in the male, narrowly separated in the female; head very abruptly constricted behind the eyes into a distinct neck; anterior coxæ moderately exserted, the prosternum raised between them to the level of the coxæ, and convex in the middle behind; metasternal episterna almost flat, without distinct groove; tibial spurs short but distinct.

This genus is proposed for two new species, both from Mexico or Guatemala. *Epicydes* approaches *Disema*, Mäkl., a genus containing numerous representatives in Tropical South America; but differs from it in the exceedingly short third joint of the antennæ, broad and emarginate apical joint of the labial palpi, &c. As in *Disema*, the eyes are very largely developed, and occupy the greater portion of the head; in the present genus, moreover, the antennæ are not strongly serrate (as in *Disema*), joints 4–10 being only a little widened towards their apex. The described species of *Disema* are stated to have an opaque patch on each side of the elytra, a character not shared by either of the two referred to *Epicydes*; certain undescribed forms, apparently referable to *Disema*, do not, however, possess this.

Nemostira, Fairm., from Madagascar, also resembles *Epicydes* in some of its characters.

1. **Epicydes oculatus.** (Tab. III. figg. 16, ♂ ; 16 *a*, labium ; 16 *b*, maxilla and maxillary palpus; 16 *c*, mandible.)

Very elongate, opaque, black or brownish-black, the elytra sometimes piceous-brown. Head with a few setiferous punctures behind and at the sides, for the rest smooth ; antennæ very long, fusco-ferruginous or ferruginous—the apical joint very elongate in both sexes, in the male longer than, in the female about equalling, joints 8–10 united ; prothorax about as long as broad, convex, the sides finely margined towards the base, moderately rounded anteriorly, and strongly constricted behind, the hind angles sharp and very prominent, the basal margin much raised, the disc obsoletely canaliculate in front and sometimes a little depressed in the middle behind, the surface finely, rather deeply, and somewhat thickly punctured; elytra with shallow intrahumeral depression, very long, widest beyond the middle, finely and deeply punctate-striate throughout, the punctures approximate, the interstices rather convex, flatter towards the base, the first with about five (varying in position—sometimes two at the apex and two or three at the base, and sometimes with only one or two near the apex), the third with from six to ten (scattered between the base and apex), the fifth and seventh with from three to six (scattered between the base and apex and sometimes obsolete), and the ninth with four or five (near the apex), fine setiferous punctures, the apices obtuse; beneath varying in colour from piceous to reddish-brown, the sides of the metasternum thickly punctured; legs long, varying in colour from piceous to testaceous, the femora smooth and glabrous.

Length $11\frac{3}{4}$–$14\frac{2}{3}$ millim. ; breadth (at the shoulders) 3–4 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Playa Vicente, Cordova, Juquila (*Sallé*), Cerro de Plumas (*Höge*) ; Guatemala, Las Mercedes (*Champion*).

Seven examples. The widely scattered setiferous impressions on the alternate elytral interstices vary in number and position, and many of them are sometimes obsolete, the first and third interstices, however, invariably have two or three at the apex. The single specimen from the Guatemalan Pacific slope agrees well with the others from the Atlantic slope of Mexico. *E. oculatus* is separated in the Sallé collection into no less than four species.

2. **Epicydes vicinus.**

Closely resembling *E. oculatus*, and differing as follows :—Slightly shining ; the elytral striæ deeper and crenately punctured, the interstices more convex, the first, third, fifth, seventh, and ninth each with one or two irregular rows of rather closely placed setiferous punctures extending from the base to the apex ; the legs varying in colour from fusco-castaneous to testaceous with the knees and tarsi piceous ; the rest as in *E. oculatus*.

Length $13\frac{1}{3}$–$16\frac{1}{3}$ millim. ; breadth (at the shoulders) $3\frac{1}{2}$–$4\frac{1}{2}$ millim. (♂ ♀.)

Hab. Guatemala, San Juan and Senahu in Vera Paz (*Champion*), Coban (*Conradt*) ; Nicaragua, Chontales (*Belt*).

Four examples only, all from the Atlantic slope. The very numerous setiferous impressions on the alternate elytral interstices and the more convex interstices and deeper striæ readily distinguish *E. vicinus* from *E. oculatus*. The upper surface is also less opaque.

SPHRAGIDOPHORUS.

Last joint of maxillary palpi subsecuriform, that of the labial palpi very broad and subsecuriform ; ligula very prominent, extending laterally as far as the sides of the mentum ; mentum trapezoidal ; outer lobe of

the maxillæ rather narrow; mandibles bifid at the apex; eyes convex, rather small; head (larger in *S. singularis*) extended on each side behind the eyes, abruptly narrowed into a neck behind; antennæ long and stout, joints 3–10 differing very little in length or breadth (7 and 8 the longest) and but little widened outwardly, 11 very elongate, especially in the male; prothorax cylindrical; elytra, at least in the male, with an oblong perfectly opaque patch on each side at or beyond the middle; anterior coxæ moderately exserted, the prosternum raised between them to the level of the coxæ; metasternal episterna quite flat (*S. cyanipennis*), or (*S. singularis*) depressed within the inner edge anteriorly; anterior femora and tibiæ in the male more or less abnormal and sulcate, the tibiæ inwardly or outwardly curved; tibial spurs short or indistinct.

This genus is proposed to include *Statira cyanipennis*, Mäkl. (from Mexico, but now known to extend southwards to Chiriqui), and an allied species from the State of Panama; a third, also from the State of Panama, of which we have only a single mutilated female example, is also provisionally referred to it; and *S. thoracica*, Mäkl., from Brazil, and *S. sculpta*, Kirsch, from Peru, may possibly have to be included in it. The very pronounced sexual characters in the anterior legs in the male, the very broad apical joint of the labial palpi, and the opaque patch on each side of the elytra in one or both sexes, are characters foreign to the very large number of species (about 150) of *Statira* known to me. The male of *S. cyanipennis* (and apparently of *S. violaceus* also) possesses a very complicated œdeagal structure, the genus differing greatly from *Statira* in this respect. The above-mentioned characters are chiefly taken from *S. cyanipennis*.

* *Eyes rather small; size small.*

a. *Head and prothorax red, the elytra violaceous.*

1. **Sphragidophorus cyanipennis.** (Tab. III. figg. 17, ♂; 17 *a*, labium; 17 *b*, maxilla and maxillary palpus; 17 *c*, mandible.)

Statira cyanipennis, Mäkl. Act. Soc. Fenn. vii. p. 591 & x. p. 647[1] †.

Hab. Mexico [1], Cordova (*Sallé*); Guatemala, Panzos (*Champion*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

This is a species of small size, with the head and thorax red and the elytra cyaneous or violaceous and subopaque. The antennæ are black (the basal joint sometimes red), long and stout; the apical joint in the male is longer, in the female shorter than, the three preceding joints united. The head and thorax have widely scattered coarse punctures, between which on the thorax are a few finer impressions; the thorax is immarginate at the sides; the eyes are quite small and distant from the base of the head; the elytra are rather coarsely punctate-striate, and have the interstices almost flat at the base and rather convex towards the apex, the first, third, and fifth from the

† Mäklin subsequently (Œfv. Finsk. Soc. xxi. p. 116) described another species of *Statira*, from Colombia, under the name of *cyanipennis*: this might be renamed *colombica*.

base to the apex with scattered setiferous impressions; the legs vary in colour from black to testaceous, and the femora and tibiæ are furnished with a few long hairs; and the under surface also varies in colour, though the venter is always more or less black.

The male exhibits the following characters:—The anterior and intermediate femora are deeply sulcate within from the base nearly to the apex; the anterior tibiæ are a little curved inwardly, and broadly concave within, the concavity opaque; and the elytra have each at the side a large oblong perfectly opaque black or ashy median patch, upon which faint lines representing the position of the striæ are visible. The opaque patch at the side of the elytra is also exhibited in the male of the following species (and in the female, the only sex known, of *S. singularis*) and in other Lagriidæ inhabiting Tropical South America; it is absent in the female of *S. cyanipennis*. The œdeagus of the male is developed in an extraordinary manner, and when extruded a very long and slender clasping-piece, hooked at the end, is to be seen on either side of the central sheath.

The description of Mäklin, though lengthy and based upon male examples, is very incomplete, the important structure of the anterior and intermediate legs &c. being overlooked altogether.

Five examples are now before me, including both sexes.

b. *Upper surface unicolorous, violaceous.*

2. **Sphragidophorus violaceus.** (Tab. III. fig. 18, ♂.)

Rather short, subopaque, violaceous. Head with a few scattered coarse deep setiferous punctures, the eyes small and distant from the base; antennæ (♂) very long and stout, black, the apical joint not quite so long as joints 8–10 united; prothorax about as long as broad, cylindrical, the sides immarginate, moderately rounded in front, and constricted behind, the hind angles acute, the disc transversely impressed in the middle behind, the basal margin moderately raised, the surface with a few widely scattered coarse deep punctures between which are some finer ones; elytra (in the male) with a large oblong perfectly opaque brownish-black lateral patch about the middle (upon which faint lines indicating the position of the striæ are visible), comparatively short, widest about the middle, finely punctate-striate, the punctures becoming much coarser towards the sides and obliterated before the apex, the interstices flat, rather convex towards the apex, the first, third, and fifth each with a few widely scattered fine setiferous punctures, the apices obtuse; beneath violaceous; legs dark violaceous, the femora and tibiæ each with a few long scattered hairs.

♂. Anterior femora a little curved, very deeply sulcate within from the base to about the middle, dilated on the lower side at the extreme base, and with a small deep ovate depression on their upper face at the extreme apex; anterior tibiæ slightly curved outwardly, and very deeply sulcate on their upper face from the base to the apex.

Length 5 millim.; breadth 1½ millim. (♂.)

Hab. Panama, Bugaba 1000 feet (*Champion*).

One male example only. This very interesting little species is allied to, though much smaller than, the preceding, and, like it, possesses very peculiar male characters. It also differs thus:—The upper surface is uniformly violaceous; the antennæ (♂) have

a shorter apical joint; and the elytra are relatively shorter and have the striæ (especially on the basal half of the disc) more finely punctured.

The extraordinary sexual characters exhibited in the male are, so far as I am aware, different from those of any known species of Coleoptera:—The anterior tibiæ are outwardly curved (the reverse to the usual way), and the groove, instead of being upon the outer or inner edge (as usual, when present), is upon the upper face.

*** Eyes large; size larger; upper surface unicolorous, violaceous-black.*

3. Sphragidophorus singularis.

Very elongate, rather convex, opaque, black, with an indistinct violaceous tinge, the elytra of a browner tint towards the base. Head with a few setiferous punctures at the base and sides, for the rest smooth; eyes convex, moderately large, rather distant from the base of the head, the latter a little extended on each side behind them; antennæ long, rather stout, black (the apical joint broken off); prothorax cylindrical, much longer than broad, the sides completely immarginate, narrowing somewhat obliquely in front, and moderately constricted behind, the hind angles acute and very prominent, the basal margin much raised, the surface smooth, except for a deep puncture on each side behind, and an indistinct one on each side before, the middle of the disc; elytra with shallow intrahumeral depression, very long, subparallel in their basal half, each with an oblong very opaque lateral depression (almost destitute of sculpture) some distance beyond the middle, finely punctate-striate, the punctures becoming a little coarser towards the sides and finer towards the apex, the striæ not extending to the apex, the interstices flat, the first with five or six (very irregularly scattered between the base and apex, those towards the apex the deepest), and the third with two (near the apex), setiferous punctures, the apices obtuse; beneath black; legs smooth, black, very long; the posterior femora somewhat flattened, their inner face grooved along the lower edge from about the middle to the apex.

Length 11 millim.; breadth $2\frac{3}{4}$ millim. (♀.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

A single female example. This insect has a different facies from any species here referred to *Statira*. The elytra have an oblong very opaque depression (almost destitute of sculpture) at the sides, as in the opposite sex of *S. cyanipennis* and *S. violaceus* and certain other South-American forms; the male doubtless has this depression much larger. The posterior femora are grooved and somewhat flattened. *S. singularis* may be further distinguished by its opaque violaceous-black colour, very elongate shape, cylindrical and immarginate thorax, the hind angles of which are acute and very prominent, and other details noticed above.

MENISCOPHORUS.

Last joint of the maxillary palpi subtriangular, its outer side a little longer than the apical side; last joint of the labial palpi broad and crescentiform, its apical side very deeply concave-emarginate; ligula prominent, emarginate in the middle and rounded on each side in front; mentum trapezoidal, transverse; outer lobe of the maxillæ broad; mandibles bifid at the apex; antennæ stout, with joints 3–10 about equal in length and breadth, and each moderately widened (but not serrate) towards their apex, 11 about as long as 9 and 10 united in the female, and only a little longer in the male; eyes convex, moderately large, somewhat widely separated; head obliquely narrowed behind the eyes and then constricted into a neck;

elytra with an oblong impunctate depression on each side, the depression velvety within; anterior coxæ moderately exserted, the prosternum raised between them; metasternal episterna almost flat, without distinct groove; tibial spurs scarcely visible.

Two species, one from the State of Panama and one from the Amazons *, agree in the above particulars, and they are accordingly separated into a distinct genus. Both have a depressed opaque impunctate velvety patch on each side of the elytra towards the apex, the elytra themselves being very coarsely crenate-striate. The very broad apical joint of the labial palpi is still more deeply emarginate than in *Epicydes* or in any species of *Colparthrum*. The two species referred to it bear a superficial resemblance to various Hispidæ and Lycidæ. The male of *M. costatus* has the anterior femora toothed and the anterior tibiæ sinuous, that of *M. amazonicus*, however, does not exhibit any marked peculiarity in this respect.

1. **Meniscophorus costatus.** (Tab. III. figg. 19, ♂; 19 *a*, labium; 19 *b*, maxilla and maxillary palpus; 19 *c*, mandible.)

Moderately elongate, black or brownish-black, opaque, the head (except the eyes and at the sides behind them), the disc of the prothorax very broadly from the base to the apex, and the sides of the elytra broadly from the base to beyond the middle (but gradually becoming more narrowly so) testaceous. Head impressed in the middle of the intraocular space, very minutely and sparsely punctured (if viewed under a very strong lens), the dark-coloured space behind the eyes coarsely and closely so, and with a deep setiferous impression on each side between the eyes in front, the latter moderately large; antennæ densely clothed with short hairs, rather long, very stout, joints 3–10 each widened towards their apex, 3 and 4 about equal in length, black or piceous, the apical joint fusco-ferruginous, the latter only as long as joints 9 and 10 united in the male and scarcely shorter in the female; prothorax cylindrical, longer than broad, the sides and apex completely immarginate, the former feebly rounded anteriorly and strongly and rather abruptly constricted behind, the basal margin broadly raised and at the sides deeply grooved within, the disc with a very deep transverse impression on each side before the middle and a shallow oblique one on each side behind, the latter almost connected with a shallow transverse impression before the base and thickly and moderately finely punctured, the dark-coloured portion of the sides more coarsely and closely so; elytra with indistinct intrahumeral depression, moderately long, subparallel in their basal half, each with a depressed oblong perfectly opaque velvety lateral patch (larger and longer in the male than in the female) towards the apex, coarsely and deeply crenate-striate, the punctures becoming finer beyond the middle, the interstices strongly convex and costate from the base to the apex and without

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* **Meniscophorus amazonicus.**

Flavous, opaque, the prothorax with the sides broadly, and the elytra with a large and broad quadrangular patch extending to beyond the basal third, the lateral margins very narrowly for the same distance, and rather more than the apical third, brownish-black, the elytra with a large depressed opaque brownish patch on each side towards the apex; antennæ with the apical joint flavous; prothorax considerably longer than broad, the disc with a foveate impression on each side about the middle and an oblique one (deepest in front) on each side towards the base, the surface very closely, coarsely, and uniformly punctured; elytra coarsely and deeply crenate-striate, the interstices convex throughout; beneath almost smooth, piceo-testaceous, the sides stained with piceous; legs brownish-piceous, the basal half of the femora testaceous, the four hinder tarsi fusco-ferruginous.

Length $6\frac{2}{3}$ millim.; breadth $1\frac{2}{3}$ millim. (♂.)

Hab. Amazons, San Paulo.

A single example, captured by Mr. H. W. Bates and now contained in his brother's collection.

setiferous impressions, the apices obtuse; beneath varying in colour from black to piceous-brown, smooth; legs slender, rather long, black or brownish-piceous, the coxæ, the basal half of the femora, and the four hinder tarsi in great part, testaceous, the femora smooth and glabrous.

♂. Anterior femora armed with a short blunt tooth on the inner side beyond the middle; anterior tibiæ very slender and sinuous.

Length $6\frac{1}{3}$–$6\frac{2}{3}$ millim.; breadth $1\frac{1}{2}$–$1\frac{2}{3}$ millim. (♂ ♀.)

Hab. Panama, Bugaba 1000 feet (*Champion*).

Four examples, two of each sex. This insect has somewhat the facies of certain species of *Uroplatopsis*, owing to the peculiar sculpture and colour of the elytra (resembling that of many Lycidæ and Hispidæ); but differs from them in the non-dilated intermediate joints of the antennæ, differently-formed labial palpi, toothed anterior femora in the male, &c.

COLPARTHRUM.

Colparthrum, Kirsch, Berl. ent. Zeitschr. 1866, p. 204.

Kirsch founded this genus upon a single species, *C. gerstäckeri*, Kirsch, from Colombia, and gave as its chief diagnostics—(1) mandibles at the apex with three strong teeth of equal length, (2) last joint of the labial palpi deeply emarginate in front, and almost crescentic in shape, (3) tibiæ with distinct spurs; and, among other characters of less importance, (4) parapleura (metasternal episterna) along the inner suture with a furrow which in front is bent inwards in an almost rectangular manner (instead of an impression occupying almost the entire surface and becoming smaller behind, as in *Statira*), (5) eyes more convex than in *Statira*, (6) antennæ with the apical joint scarcely one and a half times the length of the tenth. Two species from Central America, *Statira decorata*, Mäkl., and a new one described here, agree exactly in these particulars*; but they also have the femora more or less clavate, of which no mention is made either by Kirsch or Mäklin. In addition to these two species, three others from Central America agree in these characters, with the exception of the last joint of the labial palpi being simply triangular and not emarginate in front, and in the last joint of the antennæ being very elongate in the males of two of them. These species must either be treated as congeneric or separated into three genera; the former seems to be the proper course, and the following diagnosis will include them all:—

Last joint of the maxillary palpi securiform; last joint of the labial palpi very broad and triangular—its apex concave-emarginate (very deeply so in *C. decoratum*, moderately so in *C. foveiceps*), or almost straight (*C. calcaratum*, *C. sulcicolle*, *C. vitticolle*); outer lobe of the maxillæ short and very broad (much broader than in *Statira*); mentum extended on each side in front; ligula short and very broad, fan-shaped, extending laterally beyond the anterior angles of the mentum; mandibles furnished at the apex with three teeth (very long in *C. sulcicolle*) of equal length; eyes moderately large, convex, distant from the

* Others from Peru and Brazil, apparently undescribed, are also known to me.

base of the head, and with a deep transverse impression (rarely effaced), on either side of which is a setiferous puncture, between them; head strongly and obliquely narrowed behind into a neck; antennæ variable—the apical joint comparatively short in both sexes, scarcely equalling 9 and 10 united, or very elongate in the male (*C. foveiceps* and *C. vitticolle*); prothorax strongly compressed and completely immarginate at the sides, and with a groove behind extending completely across; elytra subparallel towards the base, and with the sides converging from about the middle; anterior coxæ moderately exserted, the prosternum raised between them to the level of the coxæ; metasternal episterna (parapleura) with a narrow deep groove along the inner edge, the groove turned abruptly outwards in front and continued along the anterior margin; tibiæ not grooved on their outer edge, and with one or two spurs of variable size—in *C. calcaratum* and *C. sulcicolle* with one only (in *C. decoratum* and *C. foveiceps* they are short but distinct, in *C. vitticolle* indistinct); femora more or less clavate towards the apex.

C. decoratum and *C. calcaratum* are obviously very closely allied, notwithstanding the difference in the shape of the last joint of the labial palpi and in the presence of a very long single spur to each of the tibiæ in *C. calcaratum*. The presence or absence of spurs to the tibiæ cannot be treated as of generic value, unless accompanied by other differences of structure, and, moreover, they are often difficult to detect amongst the short bristly hairs clothing the apices of the tibiæ. The deep groove along the inner margin of the metasternal episterna is very sharply cut, and it is apparently a character of generic value. The five Central-American species here referred to *Colparthrum* all have a very deep transverse impression (rarely effaced) between the eyes. The femora are moderately clavate in *C. decoratum* and *C. foveiceps*, strongly so in *C. calcaratum*, *C. sulcicolle*, and *C. vitticolle*.

1. *Apical joint of the labial palpi very deeply emarginate at the apex; tibial spurs short; elytra not mucronate at the apex.*

a. *Antennæ with the apical joint short in both sexes; elytra spotted.*

1. **Colparthrum decoratum.** (Tab. III. figg. 20, ♂; 20 *a*, labium; 20 *b*, maxilla and maxillary palpus; 20 *c*, mandible.)

Statira decorata, Mäkl. Act. Soc. Fenn. vii. p. 588 [1].

Hab. Mexico [1], Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Las Mercedes, Cerro Zunil, Zapote (*Champion*), Coban (*Conradt*).

Var. The anterior yellowish-testaceous spot on the elytra smaller, not extending so far laterally, and more distant from the base, the ground-colour rather darker (varying from piceous- to reddish-brown); the punctures of the striæ on the basal half of the elytra coarser, deeper, and more scattered.

Hab. Nicaragua, Chontales (*Belt*); Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Many specimens of both the type and the variety. The latter, no doubt, represents a southern race of the same species; it is connected by intermediate forms. This species is more or less reddish-brown or castaneous in colour and shining, and of moderately elongate shape; the elytra each having a transverse flavo-testaceous band

or spot (of variable size) before the middle, and another close to the apex, the spots separated from the suture by a narrow line of the ground-colour, and each usually preceded and followed by a curved or transverse black or piceous band—this is sometimes (especially in the variety) continued round the external edge of the anterior spot, and is occasionally (as in several Guatemalan examples) more or less obliterated or obsolete from both. The head has a broad, deep, transverse impression between the eyes (in which are two setiferous impressions), and some setiferous impressions behind, but for the rest smooth; the eyes are laterally prominent but not very large. The antennæ are rather long and the apical joint is hardly so long as joints 9 and 10 united in either sex. The thorax is quite smooth, very convex and cylindrical, completely immarginate, and has a deep transverse groove behind, this groove obliquely extended downwards at the sides and there becoming very deep. The elytra have a prominent humeral callus, and rows of rather coarse deep punctures placed upon shallow striæ, the punctures somewhat distantly placed and becoming still coarser towards the sides and base, and obsolete towards the apex, the sutural one only extending to the apex itself; the interstices are flat throughout, the alternate ones each with an irregular row of fine scattered setiferous impressions extending from the base to the apex, the setæ very long and erect. The legs vary in colour from reddish-brown to testaceous; the femora are quite slender at the base and become gradually clavate towards the middle (the posterior pair rather abruptly narrowed towards the base), and are smooth and glabrous; and the tibiæ are a little curved, their outer edge glabrous and rounded, and have two very short spurs.

C. gerstäckeri, Kirsch, from Bogota, must be closely allied to this widely-distributed species, though its author does not appear to have been aware of it; in the description of the former, however, no mention is made of the presence of setiferous impressions on the elytra, these being present on each of the alternate interstices in *C. decoratum*.

A male specimen from Coban is figured.

b. *Antennæ with the apical joint very long in the male; upper surface unicolorous, piceous.*

2. Colparthrum foveiceps.

Elongate, rather convex, shining, piceous-black, the head in front (and sometimes the prothorax) castaneous. Head with a broad and deep transverse impression (on either side of which is a deep setiferous puncture) between the eyes and a few setiferous punctures at the sides and behind, for the rest smooth, the eyes moderately large; antennæ testaceous or ferruginous, the two basal joints darker, long, moderately slender—the apical joint in the male nearly as long as joints 8–10, in the female less than 9 and 10, united; prothorax cylindrical, much longer than broad, the sides completely immarginate, moderately rounded anteriorly, and compressed and constricted behind, the hind angles prominent but not acute, the disc transversely grooved behind (the groove on each side obliquely extended downwards and there becoming very deep), the surface smooth; elytra with prominent shoulders, rather convex, moderately long, with regular rows of closely placed foveate impressions (which become coarser and deeper towards the sides) to a little beyond the middle and thence for some distance rather deeply striate (still more

deeply so outwardly and with crenate and much finer scattered punctures), the striæ (the first excepted) not continued to the apex, the interstices flat on the basal part of the disc and at the apex, for the rest rather convex, the first with two or three (between the base and middle) and the third, fifth, seventh, and ninth each with a row (extending from the base to the apex, but distantly placed) of shallow setiferous punctures (the setæ very long and erect), the apices obtuse; beneath piceous-black or piceous, very shining; legs long, more or less ferruginous, the femora often piceous; the latter smooth and glabrous, slender at the base and clavate outwardly (abruptly so in the posterior pair); the tibiæ and tarsi slender, the latter smooth and glabrous on their outer edge and each with two short spurs.

Length 7–8 millim.; breadth 2–2¼ millim. (♂ ♀.)

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Six examples. This species is allied to *C. decoratum*; it differs, however, in its smaller size, dark unicolorous surface, longer and more slender antennæ, the apical joint much longer in the male (and not, as in the corresponding sex of *C. decoratum*, short, as in the female), the elytra with still coarser and deeper impressions anteriorly, and rather deeply striate beyond the middle (though smooth at the apex), and with only a few setiferous impressions before the middle (these are continued to the apex in *C. decoratum*). The posterior femora in both sexes, as in *C. decoratum*, are abruptly widened from before the middle.

2. *Apical joint of the labial palpi triangular, not emarginate at the apex.*

a. *Tibiæ each with a single short spur or with the spurs indistinct; elytra not mucronate at the apex.*

* *Antennæ with the apical joint short in both sexes; upper surface unicolorous, metallic green.*

3. **Colparthrum sulcicolle.** (Tab. III. figg. 21, ♂; 21 *a*, labium; 21 *b*, mandible.)

Very elongate, narrow, very shining, the head and prothorax of a brilliant æneous or golden-green colour, the elytra metallic green. Head long, with a broad and deep transverse impression (on either side of which is a setiferous puncture) between the eyes, a deep longitudinal groove in front, and a few widely scattered setiferous punctures at the sides and base, for the rest smooth, a little rounded at the sides behind the eyes; eyes convex, rather small, and distant from the base of the head; antennæ very slender, moderately long, ferruginous—the apical joint in the male not so long as joints 9 and 10 united, in the female only a little longer than 10; prothorax cylindrical, very much longer than broad, the sides completely immarginate, slightly rounded anteriorly, and compressed and moderately constricted behind, the hind angles rather obtuse, the disc with a very deep transverse groove on each side about the middle and a shallower one running completely across at the base (the latter on each side extending downwards and there becoming very deep), the surface smooth; elytra with prominent shoulders, very long, widest about the middle, shallowly transversely depressed below the base, with regular rows of closely-placed foveate impressions to beyond the middle, the impressions then abruptly becoming finer and shallower and from here almost to the apex inserted in deep striæ (the striæ, the first excepted, not quite reaching the apex, and extending upwards along the suture to the transverse depression and very coarsely crenate-punctate along this part), the interstices almost flat at the base, but becoming very convex beyond the middle, the third, fifth, seventh, and ninth with widely scattered fine setiferous punctures (the setæ very long and erect), the apices slightly mucronate; beneath more or less piceous, smooth; legs long, ferruginous or

testaceous, the femora piceous towards the apex, the latter strongly clavate outwardly, the tibiæ and tarsi very slender, the apices of the femora and the tibiæ on all sides sparsely clothed with long erect hairs; the tibiæ each with a single sharp short spur.

Length 7–8¼ millim.; breadth 1½–1¾ millim. (♂ ♀.)

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Var. The elytral impressions finer and shallower; the apical portion with very much shallower striæ, which, the first excepted, do not extend so near to the apex, and feebly convex interstices.

Hab. Nicaragua, Chontales (*Janson*).

Seven examples of the type and one of the variety. The latter differs very considerably from the others in the intensity of the elytral sculpture, but it doubtless represents no more than a local form of the same species. The central sheath of the œdeagus of the male terminates in a broad sharply-angled triangular piece. *C. sulcicolle* is allied to *C. decoratum*, *C. calcaratum*, &c., but differs from these in its relatively narrower and more elongate shape, longer head, brilliant metallic green or golden-green colour, &c. The elytral sculpture, as in *C. vitticolle*, somewhat resembles that of certain species of *Strongylium*. The thorax is not only transversely grooved towards the base, but has another transverse deep groove on each side of the disc about the middle.

A typical specimen from the Volcan de Chiriqui is figured.

** *Antennæ with the apical joint very elongate in the male; upper surface flavo-testaceous, the prothorax with a black stripe on each side, the elytra spotted.*

4. **Colparthrum vitticolle.** (Tab. III. fig. 22, ♂.)

Elongate, yellowish-testaceous, shining; the prothorax with a long sinuous piceous stripe on each side; the elytra with a common broad transverse band at the base (not extending to the humeral callus or lateral margin), another about the middle (connected with the anterior one along the suture, extending to the lateral margin, and angulate on its lower edge), and an ill-defined oblique patch (connected at the suture) towards the apex, dark brown, the bands reddish within and enclosing a broad transverse yellowish one. Head with a broad and deep transverse depression between the eyes and a few setiferous punctures at the sides and behind, for the rest smooth, the eyes moderately large; antennæ (♂) flavo-testaceous, long and very slender—the apical joint rather longer than joints 8–10 united, the latter elongate; prothorax cylindrical, very much longer than broad, the sides completely immarginate, much rounded anteriorly, and compressed and strongly constricted behind, the hind angles prominent but not acute, the disc with a deep transverse groove behind, the surface quite smooth; elytra with prominent shoulders, widest about the middle, with regular rows of closely-placed deep foveate impressions to a little beyond the middle and thence for some distance deeply striate (with fine crenate punctures), the striæ (the first excepted) not continued to the apex, the interstices flat to about the middle and at the extreme apex, for the rest convex, the third, fifth, and ninth each with two or three very fine setiferous punctures towards the apex, the apices obtuse; beneath and the legs yellowish-testaceous, the latter long; the femora clavate towards the apex, quite slender at the base, and smooth and glabrous; the tibiæ and tarsi long and very slender, the former thickly clothed with long fine erect hairs within and smooth without and without distinct spurs.

Length 7 millim.; breadth 1¾ millim. (♂.)

Hab. Nicaragua, Chontales (*Belt*).

One male example. This is one of the most elegant forms of Lagriidæ known to me. *C. vitticolle* is allied to *C. decoratum* and *C. calcaratum*, but differs from both of these in the peculiar sculpture of the elytra (suggestive of that of certain species of *Strongylium*), and in the very slender antennæ, the last joint of which is very long in the male. The tibiæ are thickly clothed with long erect hairs within, but are smooth and glabrous without. The last ventral segment in the male has on each side a long curved lobe, the lobe shaped very much as in the same sex of *Alethia azteca* (*cf.* Biol. Centr.-Am., Col. iv. pt. 1, p. 418, t. xix. fig. 8). The lighter-coloured portions of the elytra are flavo-testaceous, like the head, thorax, and legs.

b. *Tibiæ each with a single very long spur; elytra (and fifth ventral segment) sharply mucronate at the apex, and spotted.*

5. **Colparthrum calcaratum.** (Tab. III. fig. 23, ♀.)

Elongate, rather narrow, shining, varying in colour from reddish-testaceous to castaneous or reddish-brown, the sides of the prothorax often a little darker than the disc; the elytra each with a rather broad transverse flavous band before the middle (not reaching the suture and usually widening outwardly and extending to the lateral margin, but sometimes small and in the shape of a large spot), the flavous band usually surrounded (except laterally) by a broad belt of a darker and more piceous-brown colour, the lower margin of which is oblique, and the suture sometimes stained with piceous for some distance beyond the middle. Head with a broad and deep transverse impression (on either side of which is a setiferous puncture) between the eyes and a few setiferous punctures at the sides and behind, for the rest smooth, the eyes convex but rather small; antennæ moderately slender, more or less ferruginous—the apical joint in the male about as long as, in the female shorter than, joints 9 and 10 united; prothorax cylindrical, much longer than broad, the sides completely immarginate, much rounded anteriorly, and compressed and strongly constricted behind, the hind angles prominent but not acute, the disc transversely grooved behind, the surface smooth; elytra with prominent shoulders, slightly transversely impressed below the base, widest about the middle, with rows of coarse or moderately coarse punctures, which beyond the middle become (abruptly) very much finer, and do not (the sutural row excepted) extend to the apex, the interstices flat throughout, the first, third, fifth, seventh, and ninth each with numerous setiferous punctures scattered between the base and apex (the setæ very long and erect), the apices sharply mucronate; beneath varying in colour from testaceous to reddish-brown, very shining, the apical margin of the fifth ventral segment in both sexes sharply mucronate in the middle; legs long, more or less testaceous, the femora sometimes darker, the latter strongly clavate towards the apex and slender at the base, the tibiæ and tarsi long and slender, the tibiæ and the apical halves of the femora clothed on all sides with long erect hairs; the tibiæ each with a single long sharp spur at the apex.

Length 6–8 millim.; breadth 1½–2 millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Janson, Belt*); Costa Rica, Volcan de Irazu, Cache (*Rogers*); Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Numerous examples. This remarkable species, which in some of its characters departs widely from any other member of the Lagriidæ yet described, is allied to *C. decoratum* and *C. vitticolle*. It differs from both, however, in the tibiæ being each furnished with a single very long spur, and in each elytron and the fifth ventral segment being sharply mucronate at the apex in both sexes. *C. calcaratum* is smaller than *C. decoratum* (the elytra, as in that species, varying considerably in colour), and differs also in the tibiæ and femora being clothed on all sides with long erect hairs; from

C. vitticolle the very differently sculptured elytra distinguish it at once. A well-marked specimen from Cache is figured.

OTHRYADES.

Last joint of the maxillary palpi subsecuriform, that of the labial palpi broad and triangular; mandibles furnished at the apex with three teeth of equal length; outer lobe of the maxillæ extremely broad and large, the inner lobe narrow; ligula very broad, fan-shaped, and extending laterally beyond the anterior angles of the mentum; mentum transverse, angularly extended on each side in front; eyes large, convex, rather widely separated above and beneath; head strongly and obliquely constricted behind into a neck, without transverse impression between the eyes; antennæ long, exceedingly slender, joints 3–10 each a little thickened at the apex, very elongate, 3 about twice the length of 2 (11 broken off); prothorax cylindrical, completely immarginate and feebly compressed at the sides; elytra very long, parallel to about the middle and thence to the apex converging; anterior coxæ moderately exserted, the prosternum very narrowly raised between them; metasternal episterna with a narrow deep groove along the inner margin, the groove turned abruptly outwards in front and continued along the anterior margin; legs long and slender, the femora not clavate, the tibiæ rounded on their outer edge and with indistinct spurs.

A single species only, from the State of Panama, is referred to this genus. *O. fragilicornis*, in the structure of the oral organs and some other particulars, closely approaches certain species here referred to *Colparthrum* (*C. sulcicolle* &c.), but differs from these in the non-clavate femora, large eyes, and exceedingly slender antennæ. *Othryades* should be placed near the Australian genus *Xenostethus*.

1. **Othryades fragilicornis.** (Tab. III. fig. 24, ♂; 24 *a*, labium; 24 *b*, maxilla and maxillary palpus; 24 *c*, mandible.)

Very elongate, convex, subparallel, shining, brownish-piceous or dark castaneous, the elytra æneous. Head with a few very fine setiferous punctures at the sides and base, for the rest smooth, the eyes convex and large, the space between them flat; antennæ ferruginous, long, exceedingly slender and with very elongate joints in both sexes (the apical joint broken off); prothorax cylindrical, longer than broad (sometimes a little shorter), the sides completely immarginate, a little rounded anteriorly, and moderately constricted behind, the hind angles prominent but rather obtuse, the apical margin sharply, and the basal margin moderately, raised, the disc shallowly transversely depressed behind, the surface smooth; elytra with very shallow intrahumeral depression, rather coarsely punctate-striate to about the middle and beyond this very much more finely and shallowly so, the punctures not very closely placed, the striæ (including the first) not extending to the apex, the interstices almost flat, the third with about six and the fifth with about three (scattered between the base and apex), the seventh with one (at the shoulder), and the ninth with three or four (near the apex), fine setiferous punctures, the apices mucronate; beneath æneo-piceous, very shining, smooth; legs long and slender, ferruginous, the femora usually more or less piceous, the latter smooth and glabrous.

Length 9¼–12 millim.; breadth 2–3 millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Eight examples. This species may be distinguished from all the allied New-World forms by its remarkably slender and fragile antennæ; these organs are broken in all the specimens before me, not one possessing an apical joint. *O. fragilicornis* somewhat resembles *Statira viridicollis* in shape, but has the thorax more cylindrical, completely immarginate at the sides, and smooth, and the elytra mucronate at the apex, as well as having very differently formed palpi, antennæ, &c.

RHOSACES.

Last joint of the maxillary palpi broad and securiform, that of the labial palpi ovate; mentum transverse; mandibles bifid at the apex, the lower tooth the longest and very sharp; eyes rather small, convex, widely separated above and beneath, and placed very far from the base of the head, the latter obliquely narrowed behind them into a long neck; epistoma very short and separated from the front by a deeply impressed groove; antennæ short, extending to a little distance beyond the base of the prothorax, similar in both sexes, joints 1–3 moderately slender, 4–11 much stouter and becoming still stouter outwardly, 3 one and a half times the length of 2, 4–7 each longer than 3, 8 and 9 about as long as broad, 10 transverse, 11 short, ovate, and not longer than 8; prothorax cylindrical, completely immarginate and compressed at the sides, and with a groove behind extending completely across; elytra with prominent humeri, short and convex, nearly twice as broad as the prothorax at the base, gradually widening to about the middle and thence rounded and converging to the apex; anterior coxæ moderately exserted and not contiguous, the prosternum raised between them; metasternum short and convex, not longitudinally grooved in the middle, the episterna without groove; intercoxal process broad, rounded in front, the posterior coxæ widely separated; ventral segments with one or two fine setiferous punctures on each side; legs short and slender, the femora clavate outwardly; first joint of the posterior tarsi very long, longer than the other three joints united; tibial spurs indistinct.

The single species from the State of Panama referred to this genus somewhat resembles an *Anthicus*. *Rhosaces*, apart from its different facies, may be at once separated from *Statira* and the allied forms by the intercoxal process being broadly rounded in front, the posterior coxæ widely separated, the epistoma very short, and the antennæ widened outwardly and with very short apical joint. An undescribed genus, of which one or two species from Peru are contained in Mr. F. Bates's collection, is intermediate in some respects between *Rhosaces* and certain small Casnoniiform *Statiræ* inhabiting Tropical South America; the present genus, however, is abundantly distinct from all these.

1. **Rhosaces clavipes.** (Tab. III. fig. 25.)

Varying in colour from black to castaneous, the elytra often of a more castaneous tint than the head and prothorax (in one dark-coloured example with the apical two-thirds reddish-castaneous), shining. Head with a few very fine setiferous punctures at the sides and behind the eyes, for the rest smooth; antennæ black, the basal joints, and sometimes the apical one, reddish; prothorax about or not quite so long as broad, the sides rounded in front and constricted behind, the hind angles moderately prominent, the surface smooth; elytra finely punctate-striate, the punctures becoming finer behind and not quite reaching the apex, the interstices without setiferous impressions and smooth and flat throughout, the apices slightly pointed; beneath varying in colour from piceous to piceo-testaceous, smooth; legs varying in colour from piceous to testaceous, the femora smooth and glabrous.

Length 4–4½ millim.; breadth 1⅓ millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Many examples.

STILPNONOTUS.

Stilponotus, Gray in Griffith's Anim. Kingd. ii. Ins. p. 22 (1832).
Stilpnonotus, Gemminger & Harold, Cat. vii. p. 1999.
Calophthalmus, Thomson, Musée Scientifique, p. 20 (1860).
Eurypus, Pascoe, Journ. Ent. i. p. 51 (1860) (nec Kirby, Spinola).

An examination of the fragmentary remains of the type of *Stilpnonotus*, *S. eurypi*

formis, from Brazil, which is contained in the British Museum, leaves no room for doubt that *Calophthalmus*, Thoms., is synonymous with it; moreover, the few words of description gived by Gray,—"Antennæ nearly as long as the head and thorax, much serrated; palpi with the last joints securiform; thorax square; the body in the form of an elongate cone,"—point conclusively to the same genus. In Gemminger and Harold's Catalogue, *Stilpnonotus* is erroneously given as a synonym of *Eurypus*, Kirby. *Tenebrio nitens*, Oliv., and *Eurypus cupripennis*, Pascoe, both from Brazil, probably belong to *Stilpnonotus*. Thomson included two very closely allied species in his genus *Calophthalmus*, one from Mexico and the other from Brazil; the latter is possibly not distinct from *S. eurypiformis*. The recently described *Calophthalmus tenuicornis*, Fairm., from Minas Geraes, cannot be included in this genus. In addition to the species from Mexico, we have now to record another from Nicaragua.

1. **Stilpnonotus mexicanus.**

Calophthalmus mexicanus, Thoms. Musée Scient. p. 21, t. 8. figg. 1–1*c*[1].

Hab. Mexico[1], Cordova (*Sallé*), Misantla, Jalapa (*Höge*).

Our numerous examples vary from 7½–13 millim. in length. The Brazilian species are extremely closely allied to *S. mexicanus*, and apparently only differ from it in the rather different punctuation of the upper surface. One of these, *Calophthalmus postsignatus*, Fairm., from Minas Geraes, is very closely allied to *S. mexicanus*, most of our examples of which have the thorax deeply impressed in the middle at the base and the elytra with a common sutural black patch near the apex, characters stated by Fairmaire to be peculiar to *S. postsignatus*.

2. **Stilpnonotus thomsoni.** (Tab. IV. fig. 1.)

Piceo-castaneous, shining, the elytra castaneous, the prothorax (and the elytra indistinctly) with a greenish-æneous tinge. Head finely and densely punctured; antennæ piceous, short, not reaching to the base of the prothorax, joints 4–10 strongly serrate; prothorax densely and not very finely punctured, the depression in front of the scutellum very deep; scutellum distinctly punctured; elytra widest a little beyond the middle, and thence converging to the apex, the surface very closely and moderately finely punctured; legs reddish, the tarsi piceous; beneath piceo-castaneous (the ventral surface lighter), with a greenish-æneous tinge, and closely and not very finely punctured.

Length 10 millim.

Hab. Nicaragua, Chontales (*Janson*).

A single example, contained in Mr. F. Bates's collection. This species is closely allied to *S. mexicanus*, but differs in the very much closer punctuation of the upper and under surfaces, and also in having the elytra more obliquely narrowed behind (in *S. mexicanus* they are much wider towards the apex) and comparatively less elongate. As in *S. mexicanus*, the transverse scutellum is surrounded by a groove and appears to be raised; and the elytra are strongly margined at the base and have a large and deep depression on each side within the humeri.

Fam. MELANDRYIDÆ.

This is a family numerous in genera and species in the Palæarctic and Nearctic Regions, and also in the temperate parts of the southern hemisphere. Comparatively few inhabit the tropics, either of the Old or of the New World. One species only has hitherto been described or noticed from Central America, whence we now record forty-one. A considerable number of genera (and a few species also) are common to the northern parts of Europe and North America, some of these also inhabiting Japan; and the general distribution of the majority of the genera of the Melandryidæ is more extended than in the other families of the Heteromerous Coleoptera. *Polypria*, Chevr., and several new genera here described are more or less intermediate between the Melandryidæ and the Pythidæ, and they are accordingly placed at the end of the family.

In the Melandryidæ and the following families of the Heteromera to be treated in this work the anterior coxal cavities are widely open behind; in all the preceding groups or families, the Ischyomiides (which I am now inclined to place at the end of the Melandryidæ) and the Nilionidæ excepted, they are closed behind.

The earlier stages of these insects are no doubt passed in decaying timber or in the fungoid growths attached thereto.

Group MELANDRYIDES.

EUSTROPHUS.

Eustrophus, Latreille, Règne anim. 1st ed. iii. p. 304 (1817); Lacordaire, Gen. Col. v. p. 541; Horn, Trans. Am. Ent. Soc. xv. p. 32.

This widely-distributed genus has one or more representatives in Europe, Japan, Madagascar, East Africa, and North America; three inhabit Central America. *Eustrophus* has recently been divided by Dr. Horn, certain of the rather numerous North-American species being referred to a new genus, *Holostrophus*; the latter is not represented in our fauna. In one of the three species from Central America the mesosternum is distinctly keeled in front, though it is not longitudinally raised to the level of the prosternum, and received by it as in the following genus; all three have the prosternum narrowed behind, instead of being parallel between the coxæ and prolonged to meet the mesosternum as in *Eustrophopsis*.

1. Eustrophus arizonensis.

Eustrophus arizonensis, Horn, Trans. Am. Ent. Soc. xv. p. 34[1].

Hab. North America, Arizona and New Mexico[1]. — Mexico, Northern Sonora (*Morrison*), Jalapa (*Höge*).

The three examples received from Mexico agree closely with Dr. Horn's description

of *E. arizonensis*; they have the flanks of the prothorax densely and roughly punctured, and the eyes narrowly separated. The punctures of the elytral series in the Sonora examples are coarser than the description would lead one to expect, but in the Jalapa specimen they are finer. In the absence of further material it is not advisable to treat these as distinct.

2. **Eustrophus marginatus.** (Tab. IV. fig. 2.)

Oblong ovate, moderately narrowed behind, castaneous or fulvous, a large transverse patch (sometimes divided down the middle into two) on the disc of the prothorax, and the whole of the disc of the elytra from the base nearly to the apex and laterally to the eighth row of punctures, piceous-black, the entire surface thickly clothed with rather long brownish pubescence, shining. Eyes large, approximate; antennæ with joints 1–4 ferruginous, 11 flavous, 5–10 black or brownish-black, 6–9 rather longer than broad, 10 about as broad as long; prothorax very finely and closely punctured, the basal foveæ feebly indicated and with a few coarsish punctures laterally; elytra (if viewed from above) forming a continuous outline with the prothorax, moderately coarsely striate-punctate, the punctures continued to the apex and quite distinct from those of the interstices, the latter flat, and very closely and finely punctured; beneath castaneous or reddish, very closely and finely punctured and pubescent, the venter still more densely punctured; prosternum narrowed behind and not prolonged to meet the mesosternum, the latter keeled, but declivous in front; legs ferruginous, the four hinder tibiæ strongly transversely ridged on their outer edge.

Length $5\frac{1}{3}$–6 millim.; breadth $2\frac{3}{4}$–$3\frac{1}{4}$ millim.

Hab. Mexico, Cordova, Playa Vicente (*Sallé*), Vera Cruz (*Sallé*, *Höge*), Jalapa (*Höge*); Guatemala, Yzabal (*Sallé*); Panama, Bugaba (*Champion*).

This species differs from the allied forms in having the thorax on all sides and the elytra from the base to the apex broadly margined with fulvous or castaneous. It is less narrowed behind than the North-American *E. bicolor*. The mesosternum is distinctly keeled in front, the species thus differing from typical *Eustrophi*, but not to the same extent as in *Eustrophopsis*, the anterior face of the keel being declivous and not vertical. Labelled *Eustrophus marginatus*, Chevr., in the Sallé collection.

3. **Eustrophus ovatus.** (Tab. IV. fig. 3.)

Ovate, castaneous, strongly narrowed posteriorly, the disc of the prothorax indeterminately suffused with piceous, the sides of the elytra from the base to the apex broadly and indeterminately fulvous, the entire surface thickly clothed with rather long fulvous pubescence, shining. Eyes large, approximate; antennæ with joints 1–4 ferruginous, 11 yellow, 5–10 black, 6–9 rather longer than broad, 10 about as broad as long, 11 much longer than 10; prothorax very finely and closely punctured, the basal foveæ indistinctly indicated and with a few coarsish punctures laterally; elytra forming a continuous outline with the prothorax, moderately coarsely striate-punctate, the punctures continued to the apex, the interstices flat, and very finely and closely punctured; beneath castaneous; prosternum narrowed almost to a point behind, the mesosternum slightly keeled but declivous in front; legs ferruginous, the four hinder tibiæ strongly transversely ridged on their outer edge.

Length $5\frac{1}{3}$ millim.; breadth $2\frac{1}{2}$ millim.

Hab. Guatemala, Zapote (*Champion*).

A single example. This species is allied to *E. marginatus*, but is much more ovate in shape, the elytra being strongly narrowed behind. *E. ovatus* is still more ovate in

shape than the North-American *E. bicolor*, and is also less elongate than that insect. The differently-shaped prosternum will distinguish *E. ovatus* from *Eustrophopsis*.

EUSTROPHOPSIS.

Last joint of the maxillary palpi moderately long, subcylindrical, obliquely truncate at the apex, that of the labial palpi oblong ovate; mentum trapezoidal, as long as broad; ligula prominent, deeply emarginate, broadly rounded on each side in front; maxillæ with the outer lobe broad, the inner lobe short and very narrow; mandibles strongly bifid; labrum prominent, rounded in front; head vertical; eyes deeply emarginate in front, variable—usually very large and approximate, or narrowly separated, sometimes smaller and more distant; antennæ rather short11-jointed—4 shorter than 5, 5–11 much broader and flatter than the others, 11 ovate and longer than 10; prothorax strongly transverse, rapidly narrowing from the base, with shallow or indistinct basal foveæ, the base bisinuate and with strongly produced median lobe; scutellum rather large; elytra the width of and forming a continuous outline with the prothorax at the base, with or without serial rows of punctures; coxæ widely separated; prosternum broad, horizontal, parallel or nearly so between the coxæ, prolonged behind, the apex broad and more or less deeply emarginate to receive the sharply keeled produced mesosternum, the latter raised in the middle to the level of the prosternum, vertical in front, acuminately prolonged behind, and its apex received in the longitudinal median groove of the metasternum; legs moderately long, the penultimate joint of the tarsi not lobed, the anterior tarsi not dilated in the male, the four hinder tibiæ with transverse ridges on their outer edge; tibial spurs moderately long, equal in length, and not pectinate beneath, those of the hind pair not longer than those of the intermediate pair; first joint of the hind tarsi nearly as long as the following joints united; form ovate or elliptical, broad, convex.

This genus is proposed to include numerous Tropical-American species, most of which are undescribed as yet. *Orchesia* 15-*maculata*, Casteln., may be taken as the type *, and *Eustrophus ochraceus*, Motsch., is also here referred to it. *Eustrophopsis* is closely allied to *Eustrophus* and *Holostrophus*, from both of which the differently-formed pro- and mesosternum sufficiently distinguish it. The South-American *Pseudorchesia*, Fairm., possesses some characters in common with *Eustrophopsis*, but differs from it in the much smaller scutellum and other particulars; moreover, no mention is made in the description of the broad and ovate shape, characteristic of *Eustrophopsis*, but not of *Orchesia*, to which genus *Pseudorchesia* is compared by Fairmaire. Two sets of species are indicated in the present genus, one (to which *O.* 15-*maculata* and several other spotted species belong) with the serial rows of punctures on the elytra obliterated (though usually represented by fuscous dots, apparently caused by the punctures being present on the under instead of the upper surface, and showing through), and the other with the rows of punctures present. The apex of the prosternum is very deeply and angularly emarginate in our species and in *O.* 15-*maculata*, but more shallowly so, or even subtruncate, in some others from tropical South America. Five species are here enumerated from Central America, one of which appears to be very widely distributed. Abraded examples have much the appearance of certain *Platydema* and other Diaperides inhabiting the same districts; and, like many of the Diaperides, they are found about fungi on decaying trees.

* The differences between this species and *Orchesia* are noted by Lacordaire, Gen. Col. v. p. 543, nota

1. *Elytra without serial rows of punctures.*

a. *Prothorax and elytra spotted.*

1. **Eustrophopsis nigromaculatus.** (Tab. IV. fig. 4.)

Oblong ovate, strongly narrowed posteriorly, pale flavous or flavo-testaceous, the prothorax with an elongate spot on each side at the base, the elytra with the suture, two transversely placed spots on the disc of each below the base, two similar ones below these (the inner one much the largest, and sometimes confluent with the opposite one at the suture), a broad angular band (not reaching the lateral margin but usually confluent with the opposite one at the suture) a little behind the middle, and a common triangular patch before the apex, and the scutellum, black, the surface shining and thickly clothed with yellowish pubescence. Antennæ long, black, the outer half of the apical joint yellow, joints 5–11 flattened and rather broadly dilated; eyes very large, approximate; prothorax very finely, shallowly, and closely punctured, the basal foveæ oblique, rather distinct, and with a few coarser punctures; elytra closely, finely, and uniformly punctured (more distinctly so than the prothorax), without rows of impressed punctures on their external surface, the punctures represented by irregular rows of fuscous dots showing through from the under surface; beneath finely and closely punctured, the prothorax, the metasternum in the middle in front, and the venter, flavous or reddish-testaceous, the rest piceous; prosternum broad and parallel between the coxæ, the apex very deeply and angularly emarginate; legs piceous or piceous-brown, the tarsi of a more ferruginous tint.

Length $7\frac{1}{2}$–$8\frac{1}{2}$ millim.; breadth $3\frac{2}{3}$–4 millim.

Hab. Guatemala, El Tumbador, Zapote (*Champion*).

Of described species, *E. nigromaculatus* can only be compared with the widely-distributed *E.* 15-*maculatus*; the latter has sixteen spots (the one in front of the scutellum not having been counted by the author), four on the thorax and six on each elytron (including one on the shoulder, which is absent in *E. nigromaculatus*). Five specimens.

b. *Elytra with the disc indeterminately piceous.*

2. **Eustrophopsis rotundatus.** (Tab. IV. fig. 5.)

Rotundate ovate, broad, reddish-castaneous, the disc of the elytra broadly and indeterminately suffused with piceous on each side of the suture, the surface densely clothed with rather long fulvous pubescence, and shining. Antennæ moderately long, joints 1–4 fulvous, the extreme apex of the apical one ferruginous, the rest black, 5–11 very broadly dilated and flattened, 9 and 10 transverse; eyes moderately large, separated by a space about equal to the portion of the eye visible from above; prothorax very finely punctured, the basal foveæ shallow and with two or three coarser punctures; elytra closely, finely, and uniformly punctured (more distinctly so than the prothorax), without trace of serial rows of punctures; beneath reddish-castaneous, finely and closely punctured; prosternum very broad between the coxæ, the apex narrowly and deeply emarginate; legs the same colour as the body.

Length $5\frac{1}{2}$ millim.; breadth $3\frac{3}{4}$ millim.

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

This remarkably distinct species may be easily identified by its rotundate shape and very broadly dilated outer joints of the antennæ. From *E. ochraceus* it also differs in its much smaller and widely separated eyes, absence of serial rows of punctures on the elytra, and still broader and less parallel prosternum.

2. *Elytra striate-punctate, the punctures continued to the apex.*

3. **Eustrophopsis ochraceus.** (Tab. IV. figg. 6; 6 *a*, labium; 6 *b*, maxilla and maxillary palpus; 6 *c*, mandible; 6 *d*, outline of pro- and mesosternal processes.)

Eustrophas ochraceus (sic), Motsch. Bull. Soc. Imp. Mosc. xlv. pt. 2, p. 42 (1873).

Eustrophus rufus, Chevr. in coll. Sallé.

Ovate, broad, unicolorous, varying in colour from castaneous to fulvous or ochraceous, the surface shining and thickly clothed with brownish or fulvous pubescence. Antennæ moderately long, joints 1–4 and 11 flavous or testaceous, 5–10 black; eyes very large, narrowly separated; prothorax very finely punctured, the basal foveæ shallow and with a few coarser punctures; elytra finely striate-punctate, the punctures becoming finer posteriorly, but continued to the apex, the interstices closely and finely punctured; beneath finely and closely punctured, varying in colour—in dark-coloured individuals fulvo-castaneous with the metasternum stained with piceous, in light-coloured ones entirely flavo-testaceous; prosternum broad and parallel between the coxæ, the apex very deeply and angularly emarginate; legs fusco-testaceous or testaceous.

Length $6\frac{1}{3}$–$7\frac{2}{3}$ millim.; breadth $3\frac{1}{2}$–$4\frac{1}{2}$ millim.

Hab. Mexico, Cordova, Chinantla (*Sallé*); Guatemala, Zapote (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).—Brazil[1]; Amazons, Ega, San Paulo (*H. W. Bates*).

Many specimens. This insect is very widely distributed in Tropical America. The three examples before me from the Amazons agree perfectly with the others from our region; and there is little doubt that these are referable to Motschulsky's species. The eyes are less approximate than in *E. nigromaculatus*, and the antennæ are also considerably shorter. Motschulsky gives the length as $3\frac{1}{2}$ lines.

3. *Elytra striate-punctate, the punctures not distinctly continued to the apex.*

4. **Eustrophopsis discoideus.** (Tab. IV. fig. 7.)

Ovate, moderately broad, reddish-testaceous, the prothorax with a large patch on the basal half of the disc (interrupted down the middle by a stripe of the ground-colour), and the elytra with the disc broadly from a little below the base nearly to the apex (leaving a broad margin on all sides of the ground-colour), black, the surface shining and thickly clothed with fulvous pubescence. Antennæ moderately long, joints 1–5 testaceous, the apical half of 11 yellow, the rest black, 5–11 moderately dilated; eyes very large, approximate; prothorax very finely and shallowly punctured, the basal foveæ scarcely indicated; elytra very finely striate-punctate, the punctures not distinct to the apex, the interstices closely and finely punctured (much more distinctly so than the prothorax); beneath reddish-castaneous, the metasternum a little darker, closely and finely punctured; prosternum parallel between the coxæ, the apex deeply and angularly emarginate; legs reddish-testaceous.

Length $5\frac{3}{4}$–6 millim.; breadth $3\frac{1}{3}$ millim.

Hab. Guatemala, Zapote (*Champion*).

Two examples. This species differs from the others of the genus here noticed not only in the colour of the upper surface, but in having the elytra very finely striate-punctate, the punctures on the apical portion of the disc not distinct from those of the interstices; the antennæ have the five basal joints and the outer half of the apical one flavous.

5. **Eustrophopsis bipunctatus.** (Tab. IV. fig. 8, var.)

Ovate, moderately broad, flavous or testaceous, the elytra each with a transverse black spot on the disc before the middle, this spot sometimes largely and obliquely extended inwardly and also posteriorly (in one example confluent with the opposite one at the suture and forming a large common postmedian patch), the surface shining and densely clothed with yellowish pubescence. Antennæ with joints 1–5 and the outer half of the apical one testaceous, the rest black, 5–11 moderately dilated; eyes very large and approximate; prothorax very finely and shallowly punctured, the basal foveæ indistinctly indicated; elytra very finely striate-punctate, the punctures not distinct to the apex, the interstices closely and finely punctured; beneath reddish-testaceous, closely and finely punctured; prosternum parallel between the coxæ, the apex rather deeply emarginate; legs testaceous.

Length 6–6¼ millim.; breadth 3½–3¾ millim.

Hab. Mexico, Cordova (*Sallé*); Nicaragua, Chontales (*Belt*).

In the serial rows of punctures on the elytra being confused with the punctures of the interstices towards the apex and in the coloration of the antennæ this species resembles *E. discoideus*; it may be distinguished from it, however, by its less convex shape and the different system of coloration of the upper surface. The spot on the disc of each elytron varies exceedingly in size in the five examples under examination; in two of them it is quite small. An undescribed species from the Amazons only differs from *E. bipunctatus* in having the serial rows of punctures on the elytra completely obliterated.

ORCHESIA.

Orchesia, Latreille, Gen. Crust. et Ins. ii. p. 159 (1807); Lacordaire, Gen. Col. v. p. 542; Horn, Trans. Am. Ent. Soc. xv. p. 37.

Clinocara, Thomson, Skand. Col. vi. p. 306 (1864).

Numerous species of this genus have been described from Europe, North America, Chili, and Australia. *O.* 15-*maculata,* Casteln., as already stated, is referable to *Eustrophopsis.* One is here recorded from Guatemala, this being the only true *Orchesia* known as yet from the tropical zone *; the genus is doubtless represented in Mexico. The exceedingly long spurs to the hind tibiæ, of equal length and pectinate beneath, are very characteristic.

1. **Orchesia guatemalensis.** (Tab. IV. fig. 9.)

Elongate, strongly narrowed posteriorly, brown, castaneous, or fulvo-castaneous, thickly clothed with rather coarse brownish pubescence. Eyes very narrowly separated; antennæ slender, comparatively long, gradually widening outwardly, the penultimate joints longer than broad, ferruginous or testaceous; prothorax densely and very finely punctured, the punctuation coarser at the base, the basal foveæ only indistinctly indicated; elytra narrowing from a little below the base, very finely, densely, and somewhat roughly punctured, the punctuation coarser at the extreme base and finer towards the apex; beneath with the sides and side-pieces of the metasternum densely and roughly punctured, the venter very densely and

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* The *Orchesia* (*Mycetophagus*) *janus,* Fabr., from Brazil, of Gemminger and Harold's Catalogue, vii. p. 2064, is a *Platydema,* and is, indeed, entered in the same catalogue in its proper place on p. 1952.

finely so; prosternum subparallel between the coxæ, the apex blunt; legs rather stout, brownish or ferruginous.
Length $3\frac{2}{3}$–$4\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo, El Tumbador (*Champion*).

Four examples. This species is, no doubt, closely allied to the North-American *O. gracilis*, Melsh., the prosternum being similarly shaped; but, to judge from Dr. Horn's description of that insect, *O. guatemalensis* is still more narrowed posteriorly.

The form of the antennæ of *O. gracilis* is not mentioned by Melsheimer or Dr. Horn; these organs are comparatively long and slender in *O. guatemalensis*, the species differing considerably from the allied European forms in this respect.

MICROSCAPHA.

Microscapha, Leconte, New species Col. p. 152 (1866).

This genus was established by Leconte upon a single species from Illinois and Georgia; a second from Central America is here described. *Microscapha* is allied to *Orchesia*, but easily distinguished from it by the antennæ being clubbed and having a very stout second joint, and the maxillary palpi differently shaped. Both species are of ovate shape and very small.

1. **Microscapha minuta.** (Tab. IV. fig. 10.)

Ovate, convex, sparsely pubescent, shining, black or piceous-brown, the front of the head, oral organs, antennæ, and legs testaceous. Prothorax very minutely and sparsely punctured; elytra very finely, distinctly, and rather closely punctured, without trace of serial rows of punctures.
Length $1\frac{1}{2}$ millim.

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, Chacoj in Vera Paz (*Champion*).

One example from each locality, both, unfortunately, in a mutilated condition. *M. minuta* seems to agree precisely in structure with *M. clavicornis*, from which it apparently only differs in its punctured elytra and considerably smaller size. *M. clavicornis* is described as "fere impunctata," whereas in *M. minuta* the elytra are finely but quite distinctly punctured.

CUPHOSIS.

Maxillary palpi very strongly serrate, the apical joint very long and securiform, the second and third joints acutely produced at their inner apical angle and with their apical side deeply arcuate-emarginate, the third joint only about half as long as the second; last joint of the labial palpi short, ovate; mentum rather broader than long, widest behind; maxillæ with the inner lobe exceedingly narrow, the outer lobe moderately broad; mandibles entire at the apex, without trace of tooth on the lower side; labrum prominent, rounded in front; head vertical, the epistoma not defined; eyes large, not prominent, emarginate in front; antennæ very long and filiform, tapering a little outwardly, 11-jointed—3–11 very elongate, almost equal in length, 3 about as long as 1, but very much more slender; prothorax about as long as broad, convex, a little rounded in front (if viewed from above), strongly bisinuate at the base, the basal foveæ indistinctly indicated; scutellum moderately large; elytra about as wide as the prothorax at the base, exceedingly elongate, narrowing from the base to the apex; anterior coxæ contiguous, the

cavities closed externally; prosternal episterna without well-defined suture in front, and not separated from the prosternum; middle coxæ separated by the mesosternum, the latter long and slightly keeled in front, the mesosternal epimera very sharply defined and extending to the cavities and closing them externally; metasternum long; legs very long, the four hinder tarsi exceedingly elongate, the four hinder tibiæ with a series of coarse transverse ridges on their outer edge, the first joint of the posterior tarsi equal in length to the second and third joints united; front, middle, and hind tibiæ with spurs of unequal length (those of the hind pair only a little longer than those of the middle pair), one very long, the other considerably shorter, both strongly pectinate beneath; anterior tarsi broadly dilated in the male, the penultimate joint of the anterior and intermediate pairs feebly lobed beneath (that of the anterior pair strongly so in the male), the corresponding joint of the hind pair simple; claws slender, slightly dilated at the base; body very elongate, narrow, and cuneiform, strongly compressed laterally beneath.

This interesting new genus contains a single widely distributed species, which ranges from Mexico to the Amazons. In the structure of the maxillary palpi, *Cuphosis* very nearly agrees with *Serropalpus*, *Dentipalpus*, and *Ctenoplectron*, but differs from each of these in several important structural characters; in the pectinate tibial spurs it approaches *Orchesia*. *Cuphosis* may be at once identified from all these allied genera by its very elongate cuneiform shape, long and slender limbs, unequal and pectinate tibial spurs, and strongly transversely ridged tibiæ. The inner lobe of the maxillæ is very narrow, much narrower than in *Serropalpus*. Closely allied forms inhabit Australia. Though so widely distributed, the insect appears to be everywhere very rare.

1. **Cuphosis attenuatus.** (Tab. IV. figg. 11, ♂; 11 *a*, labium; 11 *b*, maxilla and maxillary palpus; 11 *c*, mandible.)

Piceous- or ferruginous-brown, subopaque, densely clothed above and beneath with very fine, ashy, appressed, silky pubescence. Head very finely and closely punctured; antennæ reaching to about the middle of the elytra, fusco-testaceous; prothorax a little rounded at the sides, slightly narrowed in front, the hind angles obtusely rectangular, the sides finely margined from the base to a little before the middle, the disc usually canaliculate and with a large and very shallow impression on each side a little behind the middle, the surface very finely, densely, and uniformly punctured, the pubescence usually of a browner or more fulvous colour in places, in some examples of a unicolorous ashy tint; elytra with a sharp sutural stria and very shallow longitudinal grooves, in some examples with a longitudinal series of broad shallow transverse depressions across the disc, the surface very finely and densely punctured, the punctuation becoming a little coarser and more crowded at the base, on the shoulders assuming the form of transverse rugæ, and more scattered towards the apex, the apices narrow and rounded; beneath very finely, densely, and uniformly punctured; legs fusco-testaceous.

Length $6\frac{2}{3}$–10 millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*); Guatemala, Cerro Zunil, Pantaleon (*Champion*); Nicaragua, Chontales (*Belt*); Panama, Bugaba, Volcan de Chiriqui, Tolé (*Champion*). —Amazons, Pará (*H. W. Bates*).

Nine examples, including several of each sex. We figure a male from Cordova.

DIRCÆA.

Dircæa, Fabricius, Ent. Syst., Suppl. pp. 6 & 121 (1798); Lacordaire, Gen. Col. v. p. 550.
Phloiotrya, Stephens, Ill. Brit. Ent. v. p. 35 (1832).
Phlœotrya, Lacordaire, Gen. Col. v. p. 550.

Dolotarsus, Jacquelin Duval, Gen. Col. Europ. iii. p. 391 (1859–1863).

Hypulus (Paykull), Horn, Trans. Am. Ent. Soc. xv. p. 39 (1888) (nec Lacordaire, Jacq. Duval, Gemminger and Harold, &c.).

Numerous species of this genus have been described, most of which are from Europe or North America; one is known from Japan and one from Brazil. We have to enumerate four from Central America. The name *Dircæa* having long been in general use, the substitution of *Hypulus* for it (and of another name for *Hypulus*) as recently adopted by Dr. Horn (*op. cit.*) is not here followed. The maxillary palpi vary a little in the shape of the joints in each of the species here noticed; in one, *D. longicornis*, the second joint is comparatively very elongate.

* *Prosternal episterna limited anteriorly by an oblique keel; antennæ only moderately long; hinder tibiæ not transversely ridged on their outer edge.*

1. **Dircæa mexicana.** (Tab. IV. fig. 12, ♂.)

Very elongate, cylindrical, a little flattened above, varying in colour from ferruginous-brown to dark brown, opaque, the entire upper surface very finely, uniformly, and densely punctured, and densely clothed with short brownish or fulvous pubescence. Antennæ in the male moderately long and slender, and with the outer joints much longer than broad, in the female shorter and stouter, ferruginous; maxillary palpi very long, the apical joint very elongate and securiform, and nearly twice as long as the elongate-triangular second joint, the third joint rather narrower than the second; prothorax obliquely narrowed anteriorly, the sides margined from the base to beyond the middle, the disc often with one or two almost obsolete depressions on each side and a fine, slightly raised, central line, and sometimes feebly impressed in the middle before the base, the base strongly bisinuate; elytra without trace of shallow longitudinal grooves or costæ, the punctuation uniform throughout (or, rarely, a little more rugose at the base on each side of the scutellum, but not at the shoulders), the apices obtuse; beneath finely and densely punctured and densely pubescent; prosternal episterna limited anteriorly by a sharp oblique carina extending from the anterior edge of the prothorax to the anterior coxæ, the latter with the lateral cavities closed; legs ferruginous, the outer edge of the four hinder tibiæ without transverse ridges; apical margin of the fifth ventral segment arcuate-emarginate in the middle, and the anterior tarsi broadly dilated, in the male.

Length 12–20 millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*, *Höge*), Jalapa (*Höge*); Guatemala, Coban (*Conradt*); Nicaragua, Chontales (*Belt*).

Var. The marginal carina of the prothorax more sharply defined and prolonged anteriorly, and extending along the apex nearly as far as the inner limit of the eyes. (♂ ♀.)

Hab. Nicaragua, Chontales (*Belt*, *Janson*).

Var. The prothorax more rounded and less narrowed at the sides anteriorly, more convex in front, the surface granulate on the anterior portion of the disc; the rest as in the type. (♀.)

Hab. Nicaragua, Chontales (*Belt*).

Numerous examples. This species is allied to the Brazilian *D. lineata* (Perty), but may be at once known from it by its unicolorous surface, more even thorax, obtuse inner apical angles of the elytra, and other particulars. As in *D. lineata*, the prosternal episterna are limited anteriorly by a very sharp oblique carina. Of the North-American

species, *D. prona*, Lec., from Florida, is, to judge from the description, perhaps nearest to *D. mexicana*. The present insect varies greatly in size. The three forms were all found at Chontales, and there can be little doubt that they are referable to one variable species. The ventral surface is densely and uniformly pubescent in both sexes.

Labelled *Serropalpus mexicanus*, Chevr., in the Sallé collection.

2. **Dircæa piliventris.** (Tab. IV. fig. 13, ♂.)

Elongate, subcylindrical, piceous-brown, subopaque, somewhat thickly clothed with brownish pubescence. Head densely and finely punctured; antennæ (♂) moderately long, not very slender, the joints much longer than broad, piceo-testaceous; maxillary palpi (♂) with the second and third joints strongly dilated internally and rather short, the apical joint securiform and about twice as long as the second; prothorax longer than broad, the sides narrowly margined from the base to the apex, gradually narrowed in front, and feebly rounded, the hind angles obtuse, the surface densely and finely punctured, with a shallow transverse impression in front of the scutellum, and an indistinct oblique one on each side at the base, the base only very feebly bisinuate; elytra with shallow longitudinal grooves, punctured at the base (and shoulders) like the prothorax, the punctuation becoming finer, shallower, and more scattered beyond the middle, the apices rounded; beneath finely and densely punctured and sparsely pubescent; prosternal episterna limited anteriorly by an oblique carina extending from the anterior edge of the prothorax to the anterior coxæ, the latter with the lateral cavities completely closed; legs ferruginous, the hinder tibiæ without transverse ridges; ventral segments 1–4 each with a broad, transverse, densely pubescent patch in the middle, the apical margin of the fifth feebly emarginate, and the anterior tarsi moderately dilated, in the male.

Length $5\frac{2}{3}$ millim. (♂.)

Hab. Panama, Volcan de Chiriqui 4000 feet (*Champion*).

One male example. This small species is allied to *D. vaudoueri* (Muls.), an insect inhabiting Europe and North America, but is much smaller and has the upper surface more finely sculptured. The much more elongate apical joint to the maxillary palpi and the more widely separated middle coxæ distinguish it from *Xylita*.

3. **Dircæa liturata.**

Serropalpus quadrimaculatus, Say, in Long's Second Exped. ii. p. 283 (1824); Complete Writings, i. p. 187; Hald. Journ. Acad. Phil. 1848, p. 98 (nec Illiger).

Dircæa liturata, Lec. List Col. N. Am. p. 66.

Hypulus lituratus, Horn, Trans. Am. Ent. Soc. xv. p. 40[1].

Hab. North America, Canada to Virginia and Missouri[1].—? Mexico (*Sallé*).

There is a mutilated example of this species contained in the Sallé collection and labelled as from Mexico, without more definite locality. The species is therefore included in our list, though this southern habitat undoubtedly requires confirmation.

** *Prosternal episterna not limited anteriorly by an oblique keel; antennæ very long and slender; hinder tibiæ transversely ridged on their outer edge.*

4. **Dircæa longicornis.** (Tab. IV. fig. 14, ♂.)

Very elongate, cylindrical, a little flattened above, dark brown, opaque, densely clothed with short ashy

pubescence. Head finely and very densely punctured; antennæ (♂) very long and slender (extending to beyond the middle of the elytra), joints 4–11 exceedingly elongate, ferruginous; maxillary palpi (♂) with the second joint one and a half times the length of the apical joint, the latter securiform and about one third longer than the elongate-triangular third joint; prothorax longer than broad, the sides margined from the base to the apex, narrowed in front, and a little rounded behind, the surface very densely and finely punctured, and with a very shallow impression on each side at the base, the disc with traces of a smooth central line, the base strongly bisinuate; elytra flattened on the disc towards the base, with well-marked sutural stria and shallow longitudinal grooves, the surface very finely and densely punctured, the punctures becoming coarser and still closer towards the base, granular, more scattered, and here and there transversely confluent at the shoulders, and finer and more distant towards the apex, the apices obtuse; beneath finely and densely (the metasternum in the middle more coarsely and roughly) punctured and pubescent, the ventral surface densely and uniformly so; prosternal episterna not separated from the anterior portion of the prosternum; legs fusco-ferruginous, the outer edge of the four hinder tibiæ with a series of transverse ridges; apical margin of the fifth ventral segment produced in the middle and with its apex truncate, and the anterior tarsi broadly dilated, in the male.

Length 14 millim. (♂.)

Hab. Mexico, Santecomapan (*Sallé*).

A single male example. This species has a very elongate second joint to the maxillary palpi, and exceedingly long and slender antennæ, characters of almost generic importance, but agrees very closely in other respects with *Dircæa*; it is accordingly included, provisionally, in this genus. The very elongate antennæ, rugose shoulders, ridged hinder tibiæ, &c., distinguish *D. longicornis* from *D. mexicana*. The oblique ridge limiting the prosternal episterna anteriorly is not present in *D. longicornis*. In the form of its antennæ, tibiæ, &c., *D. longicornis* closely approaches the Chilian genus *Dentipalpus*.

XEUXES.

Maxillary palpi with the apical joint cylindrical and moderately long, the second and third joints subtriangular; last joint of the labial palpi narrow, oblong ovate; mentum about as long as broad, widest behind; mandibles entire at the apex, but with a short, blunt tooth on the lower side beneath; labrum prominent; head broad, vertical, the epistoma not distinctly defined; eyes convex, deeply emarginate in front; antennæ short, passing a little beyond the base of the prothorax, 11-jointed—3 triangular, longer than 4, 4–10 short and strongly serrate, 5–8 the widest, 11 ovate and narrower and longer than 10; prothorax broad and strongly transverse, with deep basal foveæ; scutellum large; elytra depressed, moderately long, very little wider than the prothorax, broadly rounded at the shoulders, subparallel to beyond the middle; anterior coxæ separated by the prosternum, the latter rounded off behind, the cavities closed externally and without lateral fissure; prosternal episterna with well-defined suture in front; middle coxæ narrowly separated, the cavities open externally, and the trochantin visible; metasternum long; legs slender; tibial spurs short; tarsi slender, the penultimate joint not lobed or dilated, the first joint of the posterior pair the length of the other three joints united; claws slender, a little dilated at the base; form elongate, rather depressed.

This genus is proposed to include a single species from North-western Mexico. It is perhaps nearest allied to the recently-described *Mallodrya*, Horn, from the United States, though approaching *Melandrya* &c. The chief characters of *Xeuxes* are the short, serrate antennæ, simple tarsi, short tibial spurs, and cylindrical apical joint of the maxillary palpi. The maxillæ are formed very much as in *Dircæa*.

1. **Xeuxes brevicollis.** (Tab. IV. figg. 15, ♀; 15 *a*, labium; 15 *b*, maxilla and maxillary palpus; 15 *c*, mandible; 15 *d*, antenna.)

Black, somewhat thickly clothed with very short pubescence, feebly shining. Head very finely and closely punctured; antennæ brownish-black; prothorax broad, strongly transverse, the sides very finely margined from the base to the apex, a little narrowed in front, and rounded, the hind angles obtuse, the base bisinuate and finely margined, the apex (if viewed from above) truncate, the surface closely and moderately finely punctured (more coarsely so than the head), with an impression on each side just behind the eyes (in a line with the deep longitudinal basal foveæ) and an interrupted smooth narrow groove down the middle; elytra distinctly depressed within the shoulders, and with very shallow longitudinal grooves on the disc, the surface very closely, finely, and uniformly punctured, the apices rounded; beneath brownish-black, finely and closely punctured, sparsely pubescent; legs piceous-brown.

Length 6½ millim. (♀.)

Hab. Mexico, Ciudad in Durango (*Höge*).

Two examples, apparently both females, were captured by Herr Höge during his second expedition.

DRANCES.

Maxillary palpi with the second joint rather long, subtriangular, the third joint triangular, much shorter than the second, the fourth joint large and triangular, longer than broad, its outer and apical sides about equal; labial palpi with the first joint small, the second joint very large and ovate, and with its apex obliquely truncate, the third joint ovate, obliquely articulated to, and narrower than, though about as long as, the second; mentum strongly transverse; ligula prominent, rounded in front; mandibles bifid; inner lobe of the maxillæ rather narrow, the outer lobe moderately broad; head short and broad, subhorizontal, the epistoma limited posteriorly by a shallow groove; eyes deeply emarginate, convex, moderately large, very widely separated, a space in front of each raised for the insertion of the antennæ; the latter 11-jointed, stout, and a little flattened, nearly reaching to the middle of the elytra, joint 3 three times as long as and much broader than 2, rather shorter than 4, 4–10 longer than broad, 11 longer than 10, and ovate; prothorax strongly transverse, broadly truncate in front, the sides dilated posteriorly, and rather sharply separated from the flanks, the basal foveæ not indicated, the base bisinuate; scutellum transverse, rather large; elytra long, a little wider than the prothorax at the base, the sides almost straight (though gradually narrowing) to far beyond the middle, the apices separately rounded; anterior coxæ contiguous, the cavities closed externally, but widely open behind; middle coxæ narrowly separated, the cavities open externally, and the trochantin visible; legs rather long, moderately stout; penultimate joint of the tarsi small, very feebly lobed beneath, the basal joint of the hind tarsi the length of the following joints united; form very narrow, elongate, rather depressed.

This genus is proposed for an inconspicuous insect from Mexico. *Drances* is perhaps nearest allied to *Symphora*. The labial palpi differ in form from those of the majority of the Melandryidæ in having the second joint very stout, stouter than the apical one, and with its apex very obliquely truncate.

1. **Drances angustatus.** (Tab. IV. figg. 16; 16 *a*, labium; 16 *b*, maxilla and maxillary palpus; 16 *c*, mandible.)

Black, the front of the head and the oral organs fusco-ferruginous, sparsely pubescent, slightly shining. Head very closely and coarsely punctured; antennæ black; prothorax very closely and coarsely punctured, broadest at the base, the sides almost straight behind, and rounded and a little narrowed in front, the hind angles rectangular, the disc with traces of a very shallow oblique groove on each side behind; elytra with very shallow intrahumeral depression, punctured like the prothorax, and without trace of serial rows of impressions; beneath piceous-black, the sides of the pro- and metasternum densely and somewhat

coarsely, the rest of the surface more sparsely, punctured; legs piceous-black, closely and roughly punctured.

Length $4\frac{1}{3}$ millim.; breadth $1\frac{1}{3}$ millim.

Hab. Mexico, Guanajuato (*Sallé*).

One example, possibly a male.

SYMPHORA.

Symphora, Leconte, New species Col. p. 150 (1866).

Two species of this genus have been described, both from the United States; seven are now added from Central America, of five of these single examples only have been captured. The last joint of the maxillary palpi varies a little in shape in our species, it being rather short and with the outer and apical sides more rounded in *S. ruficeps* and more elongate and with the outer side straighter in *S. maculata*. The penultimate joint of the tarsi is feebly but distinctly lobed beneath in *S. maculata*, but in our other species it is not or only very indistinctly lobed. The eyes also vary in size, *i. e.* they are moderately large and very prominent in *S. maculata*, and very small in *S. ruficeps*; in the North-American *S. flavicollis* they are larger than in either of the Central-American species. With our very limited amount of material it is not advisable to treat these differences as generic. These insects are of small size and have somewhat the facies of *Anaspis*.

They are found about fallen trees.

1. *Prothorax with an oblique groove on each side behind.*

1. **Symphora tropicalis.** (Tab. IV. fig. 17.)

Moderately elongate, not very convex, varying in colour from piceous-black to brown, the head (the eyes excepted), the prothorax above and beneath, and the oral organs reddish- or flavo-testaceous, sparsely pubescent, shining. Head closely and finely punctured, the eyes rather small, very widely separated; antennæ moderately long, the four basal joints, and usually the apical one also, testaceous, the rest piceous; prothorax strongly transverse, the sides slightly rounded anteriorly, narrowed in front, and almost straight behind, the disc with an oblique deep groove on each side behind the middle, the surface densely and somewhat coarsely punctured; elytra rather long, subparallel to about the middle and thence rapidly narrowed to the apex, very closely and moderately coarsely punctured; beneath very densely and finely punctured, the metasternum almost smooth in the middle; legs testaceous, the tarsi sometimes a little darker.

Length $2\frac{2}{3}$–3 millim. (♂ ♀.)

Hab. Guatemala, Zapote, Capetillo, San Gerónimo (*Champion*).

Var. The elytra with the apical half (the suture excepted) and a transverse space below the base (indeterminately defined) fusco-testaceous.

Hab. Guatemala, San Gerónimo (*Champion*).

Five examples, including one of the variety. These differ a little *inter se*, but are, no doubt, all referable to one species. *S. tropicalis* closely resembles *S. flavicollis*, Lec.,

two specimens of which from Texas are before me, but may be distinguished from it by its smaller and more widely separated eyes, finer and more closely punctured elytra, and rather more elongate shape. Though variable in colour *S. tropicalis* invariably has the elytra darker than the head and thorax. *S. rugosa*, Lec., is unicolorous and has a much more rugose and less convex thorax.

2. **Symphora impressicollis.**

Closely resembling *S. tropicalis* and differing as follows:—The antennæ entirely testaceous; the prothorax more convex, more rounded at the sides, scarcely narrower at the apex than at the base, the surface rather more coarsely punctured, the impressions deep; the elytra with the sutural region broadly and indeterminately (still more broadly so towards the base) fusco-testaceous; the under surface a little more coarsely punctured.

Length $2\frac{2}{3}$ millim.

Hab. Mexico, Acapulco (*Höge*).

Though only a single example has been received of this insect it seems impossible to treat it as a variety of *S. tropicalis.*

3. **Symphora apicalis.** (Tab. IV. fig. 18.)

Moderately elongate, not very convex, shining, sparsely pubescent, black, the head and oral organs, the prothorax, the apex of the elytra, and the legs flavo-testaceous. Head very closely and moderately finely punctured, the eyes small and very widely separated; antennæ moderately long, joints 1–4 testaceous, the rest piceous; prothorax strongly transverse, not very convex, narrowing from the base, the hind angles subrectangular, the disc with a large and deep oblique groove on each side, the surface densely and coarsely punctured; elytra subparallel to about the middle, narrowing thence to the apex, very closely and rather coarsely punctured; beneath coarsely and densely punctured, the ventral surface much more finely so, the last two segments fusco-testaceous, the rest (except the head and prothorax) black.

Length $2\frac{3}{4}$ millim.

Hab. Panama, Volcan de Chiriqui 4000 feet (*Champion*).

One specimen. This species closely resembles *S. tropicalis*, and, at first sight, would appear to be only a colour-variety of that insect; it differs, however, in the more coarsely punctured under surface, the metasternum, especially, having very much coarser impressions. The thorax is narrowed from the base, and has the oblique impression on each side of the disc larger and deeper, and (like the elytra) is also a little more coarsely punctured.

4. **Symphora ruficeps.**

Moderately elongate, convex, sparsely pubescent, slightly shining, piceous-brown or brown, the head (except the eyes) and the shoulders, and sometimes the sides of the prothorax and of the elytra (indeterminately), reddish-testaceous or testaceous. Head very closely and rather coarsely punctured, the eyes small and very widely separated, the last joint of the maxillary palpi piceous; antennæ moderately long, the three or four basal joints, and sometimes the apical one or two, testaceous, the rest piceous; prothorax convex, transverse, narrowing from the base, the disc with a rather shallow oblique groove on each side towards the base, the surface densely and rather coarsely punctured; elytra subparallel to about the middle, rather obtuse behind, very closely and

moderately coarsely punctured; beneath piceous-brown or piceo-castaneous, densely and not very finely punctured; legs testaceous.

Length $2\frac{1}{2}$–3 millim. (♀.)

Hab. GUATEMALA, Dueñas (*Champion*).

Three examples, apparently including both sexes. This insect is more convex and more obtuse behind than *S. tropicalis* &c.; the apical joint of the maxillary palpi is piceous in colour, and has the outer and apical sides, and also the inner angle, more rounded.

5. **Symphora maculata.** (Tab. IV. fig. 19, ♂.)

Elongate, not very convex, moderately shining, sparsely pubescent; flavo-testaceous, the prothorax with an ill-defined stripe on each side of the disc, the elytra with a triangular scutellar patch (not including the scutellum), connected along the suture with a common transverse band near the apex, and a rather large lateral spot placed a little before the middle, and the eyes, black or piceous. Head closely and somewhat coarsely punctured, the oral organs testaceous; the eyes convex, prominent, and moderately large; antennæ very long, extending to beyond the middle of the elytra, joints 1–3 flavo-testaceous, 4–11 piceous, the apical joint a little lighter; prothorax moderately transverse, rather convex, the sides straight behind and narrowing and rounded in front, the hind angles subrectangular, the disc with a deep oblique impression on each side towards the base, the surface densely and rather coarsely punctured; elytra narrowing from about the middle, closely and moderately coarsely punctured; beneath (the head excepted) piceous, very closely and rather coarsely, the ventral surface more finely, punctured; legs entirely testaceous, the penultimate joint of all the tarsi feebly lobed beneath.

Length $2\frac{3}{4}$ millim. (♂.)

Hab. GUATEMALA, Cerro Zunil 4500 feet (*Champion*).

One male example only of this very distinct species was captured. The antennæ are much longer in *S. maculata* than in the other members of the genus.

2. *Prothorax without oblique groove on each side behind.*

6. **Symphora convexa.** (Tab. IV. fig. 20.)

Moderately elongate, very convex, strongly narrowed posteriorly, above and beneath piceous-black, the head anteriorly and the oral organs fusco-testaceous, sparsely pubescent, not very shining. Head finely and closely punctured, the space between the eyes more sparsely so, shining, the eyes rather small; antennæ moderately long, black, the basal four joints fusco-testaceous; prothorax strongly transverse, convex, narrowing from the base, the surface very densely and rugosely punctured and without impressions; elytra narrowing from a little below the base, very closely and rather coarsely punctured; beneath closely and coarsely punctured, the ventral surface much more finely so; legs brownish-black.

Length 3 millim.

Hab. GUATEMALA, Cerro Zunil 4500 feet (*Champion*).

A single example. Viewed laterally and longitudinally this insect is of a more arcuate shape than any other species of the genus. The thorax is narrowed from the base, very densely and rugosely punctured, and quite unimpressed. The elytra are more narrowed posteriorly than in the allied forms. *S. convexa* closely resembles some of the black species of *Anaspis*; but, apart from other differences, may be at once known from such by the more slender tarsi, the first joint of the hind pair being exceedingly elongate and longer than the three other joints united *.

* In our figures of this species and of *S. apicalis* and *S. maculata* the hind tarsi are incorrectly drawn: the first joint should be more elongate and the other joints shorter (as in fig. 17).

7. Symphora elongata.

Elongate, convex, moderately narrowed posteriorly, brownish-black, the head (the eyes excepted) reddish-testaceous, sparsely pubescent, slightly shining. Head finely and very closely punctured, the eyes moderately large, the palpi fusco-testaceous; antennæ long, the joints elongate, 1–6 testaceous, the rest piceous; prothorax convex, strongly transverse, the sides slightly rounded and narrowing from a little before the base, the surface densely and rugulosely punctured and without impressions; elytra narrowing from about the middle, very closely and rather coarsely punctured; beneath (the head excepted) brownish-black, closely and coarsely punctured, the ventral surface much more finely so; legs fusco-testaceous, the femora and coxæ flavo-testaceous.

Length 3 millim. (♂.)

Hab. GUATEMALA, Capetillo (*Champion*).

One specimen. This species is closely allied to *S. convexa*, but differs from it in its less arcuate shape (viewed laterally and longitudinally), much longer antennæ, more closely punctured head, and paler legs, and, more particularly, in the elytra being more parallel and less narrowed behind.

Group SCRAPTIIDES.

CANIFA.

Canifa, Leconte, New species Col. p. 144 (1866); Leconte and Horn, Class. Col. N. Am. p. 399 (1883).

Leconte has separated the North-American *Scraptiæ* into three genera, *Scraptia*, *Allopoda*, and *Canifa*, basing these chiefly upon differences in the shape of the apical joint of the maxillary palpi and upon the lobing or not of the penultimate joint of the tarsi. Three species from Central America agree very well with *Canifa* in having the apical joint of the maxillary palpi rather long and subcultriform, the third joint of the antennæ very short in the male, the penultimate joint of all the tarsi lobed beneath, and the first joint of the hind tarsi about twice as long as the following joints united; they are accordingly referred to that genus. For the other allied forms from our region a new genus has been required. Four species of *Canifa* have been recorded, all from the United States. In those from Central America here described the sexes show a very marked disparity in the size of the eyes (at least in *C. speciosa*) and in the form of the antennæ *, the latter, as in certain species of *Cistela*, having the second and third joints in the male very short and equal in length and together only about, or not much more than, half as long as the fourth joint. *Cteniacantha marginata*, Qued., from Puerto Rico, to judge from the description and figure (*cf.* Berl. ent. Zeitschr. 1886, pp. 119–121), is, no doubt, very closely allied to the species here referred to *Canifa*; but these latter have the mandibles strongly bifid (at least in *C. speciosa*), the apical joint of the maxillary palpi only moderately elongate, and the tibial spurs not or scarcely pectinate, characters not agreeing with Quedenfeldt's description.

* This is not mentioned by Leconte.

The species of this and of the following genus are found about the branches of felled or decaying trees.

1. **Canifa speciosa.** (Tab. IV. figg. 21, ♂; 21 *a*, labium; 21 *b*, maxilla and maxillary palpus; 21 *c*, mandible.)

Elongate, subparallel, flavo-testaceous or testaceous, the elytra sometimes with a brownish or piceous ill-defined sublateral stripe, sparsely pubescent, moderately shining. Head very coarsely and closely punctured; eyes black—in the male very large and subapproximate, in the female smaller and much more distant; antennæ testaceous—in the male very long, fully reaching to the middle of the elytra, with joints 2 and 3 very short and equal, 4 three or four times as long as 3, and 4–11 very elongate and subequal—in the female shorter and more slender, and with joint 3 considerably longer than 2 and about half the length of 4; prothorax transverse, the sides much rounded anteriorly and straight behind, gradually narrowing from the base in some examples, the hind angles rectangular or subrectangular, the basal foveæ large and very deep, the disc usually more or less distinctly canaliculate, the base trisinuate, the surface coarsely, closely, and roughly punctured; scutellum coarsely punctured; elytra long and subparallel, closely and moderately coarsely punctured; beneath finely and rather sparsely, the sides of the pro-, meso-, and metasternum densely, punctured; legs hairy, testaceous; the penultimate joint of all the tarsi lobed beneath, that of the two front pairs broadly so; anterior tibiæ slightly, the intermediate tibiæ more or less distinctly, sinuate in the male, the anterior pair in some examples slightly dilated on the inner side near the base.

Length (with the head extended) 5–8⅓ millim. (♂ ♀.)

Hab. Mexico, Real del Monte in Hidalgo, Jalapa (*Höge*); Guatemala, Coban (*Conradt*), San Joaquin, Cerro Zunil 4000 feet (*Champion*).

Var. Prothorax not so coarsely or roughly punctured; the eyes less approximate and the anterior tibiæ triangularly dilated on the inner side before the middle in the male.

Hab. Mexico, Omilteme 8000 feet, Xucumanatlan, Amula, and Chilpancingo in Guerrero (*H. H. Smith*).

This species is not uncommon in Mexiço and Guatemala, whence we have about forty specimens. *C. speciosa* varies greatly, not only in size but in sculpture and in the development of the male characters. In the examples from each of the localities slight differences are to be found, though not of sufficient importance to be regarded as specific. The antennæ of the male are stouter than those of the female. In the single male of the variety the anterior tibiæ are triangularly dilated within and the middle tibiæ are more sinuous; intermediate examples, however, occur. Some of our specimens are of a piceo-testaceous colour, but this is probably due to discoloration. The apical point of the labial palpi (as in *Scraptia* &c.) is transversely securiform and exceedingly broad, its apical side very much longer than the outer side. A male from Cerro Zunil (where examples of both sexes of the insect were captured in numbers) is shown on our Plate.

2. **Canifa oculata.**

Elongate, narrowing posteriorly, above and beneath (the eyes excepted), antennæ, and legs flavo-testaceous, sparsely pubescent, slightly shining. Head very coarsely and closely punctured; eyes black, very deeply

emarginate in front (the ocular canthus extending more than halfway across), narrowly separated in the male, more distant in the female; antennæ moderately long, joints 2 and 3 in the male very short, equal in length, and together not nearly so long as 4, joint 3 in the female half as long again as 2; prothorax transverse, narrowing from the base, the sides much rounded in front, the hind angles acutely rectangular, the basal foveæ shallow, the disc sometimes obsoletely canaliculate, the base feebly bisinuate and almost straight, the surface coarsely, closely, and roughly punctured; scutellum coarsely punctured; elytra widest a little before the middle and narrowing thence to the apex, closely and moderately coarsely punctured; beneath finely and sparsely punctured, the metasternum coarsely so at the sides and smooth in the middle; anterior and intermediate tarsi distinctly, the posterior tarsi very narrowly and indistinctly, lobed beneath.

Length (with the head extended) $3\frac{3}{4}$–$4\frac{1}{2}$ millim. (♂ ♀.)

Hab. Guatemala, San Gerónimo 3000 feet (*Champion*); Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Seven examples from Guatemala and two from the State of Panama. Smaller and more narrowed behind than *C. speciosa*; the antennæ shorter and more slender; the eyes more deeply emarginate; the thorax with shallow basal foveæ and the base more truncate; and the penultimate joint of the hind tarsi indistinctly lobed. The last ventral segment in the male has very long, curved, and greatly-developed lateral lobes.

3. **Canifa circumdata.** (Tab. IV. fig. 22, ♂.)

Moderately elongate, pallid testaceous, the sides and apex of the elytra, and the sides of the prothorax less distinctly, piceous brown, sparsely pubescent, slightly shining. Head closely and coarsely punctured; eyes (♂) black, very deeply emarginate, narrowly separated; antennæ (♂) pallid testaceous, rather stout, joints 2 and 3 very short and equal, together about half the length of 4; prothorax strongly transverse, about twice as broad as long, convex, narrowing from the base, the sides much rounded, the hind angles rectangular, the basal foveæ minute, transverse, and placed just within the margin, the disc shallowly impressed in the middle towards the base, the surface closely, moderately coarsely, and rather roughly punctured; scutellum similarly punctured; elytra widest about the middle, rather obtuse behind, more sparsely and much more coarsely punctured than the prothorax; beneath testaceous, the venter stained with piceous; legs pallid testaceous; the penultimate joint of all the tarsi (that of the posterior pair less distinctly) lobed beneath.

Length (with the head extended) 3 millim. (♂.)

Hab. Guatemala, El Tumbador 2500 feet (*Champion*).

One male example, captured on the Pacific slope of Guatemala. This small species may be readily identified by its system of coloration. The thorax is comparatively very short and has very minute basal foveæ; the elytra are comparatively more coarsely punctured than in the two preceding species, the punctuation being considerably coarser than that of the thorax.

EVALCES.

Last joint of the maxillary palpi elongate, subtriangular, its apical side much shorter than the outer side and somewhat rounded; last joint of the labial palpi broad ovate, its apex truncate; mentum about as long as broad, sinuate at the sides, broadest behind; lobes of the maxillæ long, the inner one very narrow; mandibles simply unidentate; head vertical, comparatively narrow, rather long, a little rounded behind, suddenly constricted into a neck as in *Scraptia*; eyes small, similar in both sexes, deeply emarginate in

front; antennæ rather short, moderately stout, similar in both sexes, joint 3 much longer than 2 and as long as 4; prothorax moderately transverse, strongly narrowed in front, the sides much rounded, the base feebly bisinuate or subtruncate, the basal foveæ quite shallow; anterior coxæ contiguous, with very prominent trochantin; intermediate coxæ contiguous; tibial spurs equal in length, slender; penultimate joint of the anterior and intermediate tarsi very distinctly lobed, that of the posterior tarsi simple; first joint of the posterior tarsi shorter than the following joints united.

Several species from Central America agree in the above particulars. In form the labial palpi and mandibles are quite different from those of *Scraptia* and its allies. *Evalces* agrees in some respects with Leconte's description of *Allopoda*, but the latter is expressly stated to have the labial palpi formed as in *Scraptia* and *Canifa*; *i. e.* very transverse, with the apical side longer than the others. All the species referred to *Evalces* have the head less truncate behind and narrower and more elongate in shape than in *Scraptia* &c.; three of them possess very well-marked male specific characters. The genus bears a deceptive resemblance to *Anaspis*.

1. **Evalces griseus.** (Tab. IV. figg. 23, ♂; 23 *a*, labium; 23 *b*, maxilla and maxillary palpus; 23 *c*, mandible; 23 *d*, œdeagus.)

Elongate, narrow, piceous or piceous-brown, rarely testaceous with the prothorax slightly stained with piceous, the elytra in the dark examples sometimes with an indistinct piceo-testaceous vitta extending from the shoulder to the apex, sparsely pubescent, slightly shining. Head densely and rather coarsely punctured; antennæ and maxillary palpi varying in colour from piceous to fusco-testaceous; prothorax convex, narrowing from the base, densely, roughly, and moderately coarsely punctured; elytra very closely, finely, and somewhat coarsely punctured; beneath finely and densely punctured, the metasternum more sparsely so; legs slender, fusco-testaceous or testaceous, the tibiæ similar in both sexes; central sheath of the œdeagus of the male stout and cylindrical to the end, curved, and armed at the apex beneath with about four very sharp teeth directed backwards and above with a few bristly hairs, the apex blunt (fig. 23 *d*).

Length (with the head extended) 3 millim. (♂ ♀.)

Hab. Guatemala, San Gerónimo, Panajachel (*Champion*).

Ten examples. In each of the five male specimens the œdeagus is extruded and exhibits the above-mentioned marked peculiarity: a similar armature is present in many Cantharidæ and Meloidæ.

2. **Evalces dentipes.**

Elongate, narrow, fusco-testaceous (the apical half of the elytra a little darker in one specimen), sparsely pubescent, moderately shining. Head closely and rather coarsely punctured, the eyes black; antennæ and oral organs testaceous; prothorax not very convex, densely, finely, and somewhat roughly punctured, the sides almost straight behind; elytra closely and finely punctured; beneath testaceous, the venter a little darker; legs moderately slender, pallid testaceous; anterior tibiæ in the male armed on the inner side with a sharp triangular tooth about the middle; central sheath of the œdeagus of the male slender, very little curved, and furnished beneath with numerous bristly hairs.

Length (with the head extended) 3–3¼ millim. (♂ ♀.)

Hab. Guatemala, San Gerónimo, Paso Antonio (*Champion*).

Three examples, two males and one female, two of which were captured in the low

hot region of the Pacific slope. *E. dentipes* is closely allied to *E. griseus*, from which it not only differs in its male characters, but in the finer and less rough punctuation of the upper surface, and less convex thorax.

3. **Evalces sinuatipes.** (Tab. IV. fig. 24, ♂.)

Elongate, narrow, testaceous or fusco-testaceous, sparsely pubescent, slightly shining. Head densely and rather coarsely punctured, the eyes black; antennæ stout, testaceous; prothorax not very convex, somewhat flattened on the disc, densely, finely, and rather roughly punctured, the sides straight behind; elytra finely and densely punctured; legs testaceous, comparatively stout; the anterior tibiæ slightly serrate within in their apical half, and the posterior tibiæ sinuate, in the male.

Length (with the head extended) $3\frac{1}{4}$–$3\frac{3}{4}$ millim. (♂ ♀.)

Hab. GUATEMALA, Chiacam and San Gerónimo in Vera Paz (*Champion*); PANAMA, Peña Blanca (*Champion*).

Four specimens, two of each sex. Rather more depressed than *E. griseus*; the antennæ and legs much stouter, the punctuation of the thorax and elytra finer, denser, and less rough; and the hind femora distinctly sinuate in the male. The anterior tarsi are dilated in the male. The example from Chiacam, a female, has the thorax and elytra more densely punctured, but it is apparently referable to the same species, the sculpture also varying a little in the other specimens.

4. **Evalces luteus.**

Elongate, moderately narrow, luteous, sparsely pubescent, slightly shining; above finely and densely, the prothorax more roughly, the head more coarsely, punctured. Antennæ varying in colour from fusco-testaceous to piceous with the two basal joints lighter; eyes black; prothorax large and convex, much rounded at the sides, narrowing from the base; beneath densely and finely punctured; legs ferruginous.

Length (with the head extended) $4\frac{1}{2}$ millim. (♀.)

Hab. MEXICO, Acapulco (*Höge*), Omilteme in Guerrero 8000 feet, Cuernavaca (*H. H. Smith*).

Three examples, apparently all females. The individual from Omilteme is of a piceous-brown colour, but this is apparently due to discoloration. Much larger than *E. griseus*, the elytra more finely and more densely punctured, the thorax convex and largely developed and with the sides much rounded.

5. **Evalces longulus.**

Elongate, narrow, fusco- or piceo-testaceous, sparsely pubescent, slightly shining; above very densely and very finely, the head more coarsely, punctured. Antennæ ferruginous; eyes black; prothorax not very convex, the sides straight behind; elytra proportionately very long; legs ferruginous; beneath densely punctured; central sheath of the œdeagus of the male slender and narrowing towards the end.

Length (with the head extended) $3\frac{1}{2}$ millim. (♂.)

Hab. MEXICO, Guanajuato (*Sallé*).

Two examples, one of which is a male. Narrower and smaller than *E. luteus*; the thorax more finely and still more densely punctured and rather less convex. Larger

and more elongate than *E. griseus* &c.; the elytra comparatively longer, the upper surface more densely punctured.

Group **OSPHYIDES.**

OSPHYA.

Osphya, Illiger, Mag. Ins. vi. p. 370 (1807) (sine descr.); Jacquelin Duval, Gen. Col. Europ. iii. p. 382; Gemminger & Harold, Cat. vii. p. 2073.

Pelecina, Illiger, Mag. Ins. vi. p. 300 (sine descr.).

Nothus, Olivier, Encycl. Méthod. Ins. viii. p. 384 (1811); Lacordaire, Gen. Col. v. p. 561 (1859); Leconte & Horn, Class. Col. N. Am. p. 400 (1883).

Six species of this sharply-defined genus have been described, four from Europe and two from North America. We have now to record two from Guatemala, one from the Atlantic, the other from the Pacific slope. The male of only one of these has been discovered: this has the posterior femora not thickened, the posterior tibiæ strongly sinuate and with the inner apical angle not abruptly bent inwards and spiniform at the tip, and the ventral segments 1–3 each furnished with a stout erect compressed tubercular elevation, the insect thus differing greatly from the typical species of the genus. The name *Nothus* having been thrice occupied in zoology, we do not follow Lacordaire and others in using it.

The different species are found upon flowers.

1. **Osphya tuberculiventris.** (Tab. IV. figg. 25, ♂; 25 *a*, profile of abdomen.)

Moderately elongate, rather narrow, the anterior half of the head, the oral organs, the prothorax above and beneath, and the meso- and metasternum in the middle, testaceous or reddish-testaceous, the rest of the upper and under surfaces black, the disc of the prothorax on each side longitudinally (or almost entirely) and the head in front sometimes piceous or black, the surface slightly shining, somewhat thickly clothed with short fine pubescence, the suture and two longitudinal stripes on each elytron (towards the side, the outer one the broadest) clothed with ashy, the rest of the elytra with black, pubescence, the discoidal stripes sometimes not defined or indistinct. Head very closely and finely punctured, the epistoma more sparsely and coarsely so; antennæ slender, comparatively short, extending to about the basal third of the elytra, piceous, the three basal and the three or four apical joints more or less testaceous; prothorax transverse, the sides expanded, rounded posteriorly, and obliquely narrowing in front, the hind angles obtuse, the base truncate but shallowly emarginate in the middle, the surface densely, minutely, and uniformly punctured; elytra very densely and finely punctured, the punctures here and there confluent; beneath very closely and finely punctured, the ventral surface much more sparsely punctate towards the apex; legs pubescent, piceous, the basal two-thirds of the femora and the basal half of the tibiæ more or less testaceous.

♂. Intermediate tibiæ a little curved and at the apex slightly dilated within; posterior femora not thickened, a little curved; posterior tibiæ dilated in the middle and strongly sinuous within, their outer edge straighter; ventral segments 1–3 each with an erect flattened longitudinal elevation in the middle towards the apex (fig. 25 *a*).

Length 6–6⅔ millim. (♂ ♀.)

Hab. Guatemala, San Gerónimo (*Champion*).

Six examples, four males and two females.

2. Osphya pallida.

Moderately elongate, shining, sparsely pubescent, above and beneath and the legs and antennæ testaceous or yellowish-testaceous. Head finely and somewhat closely punctured; antennæ (♀) very long, extending to far beyond the middle of the elytra; prothorax strongly transverse, the sides rounded, scarcely more narrowed in front than behind, and very sharply margined, the margins reflexed, the base subtruncate but shallowly emarginate in the middle, the surface finely and somewhat closely punctured, the punctures more scattered on the disc; elytra more closely and roughly punctured than the prothorax; beneath closely and finely punctured.

Length $5\frac{1}{2}$ millim. (♀.)

Hab. Guatemala, Cerro Zunil, Pantaleon (*Champion*).

Two female examples. This species differs from *O. tuberculiventris* in its very much longer antennæ, shorter and more sharply margined thorax, and much coarser and more diffuse punctuation of the upper surface. Both specimens are of a unicolorous testaceous colour. *O. lutea* (Horn), from California, is apparently an allied species. *O. pallida* has much the facies of the European *Conopalpus testaceus*, but is very much smaller than that insect.

Group MYCTERIDES.

MYCTERUS.

Mycterus, Clairville, Ent. Helv. i. p. 124 (1798); Lacordaire, Gen. Col. v. p. 720; Horn, Trans. Am. Ent. Soc. vii. p. 339; Leconte & Horn, Class. Col. N. Am. p. 400 (1883).

Ten species of this genus have been described, six from Europe or North Africa and four from the United States; one is now added from Mexico. They are found upon flowers in open places.

1. Mycterus depressus. (Tab. IV. fig. 26, ♀.)

Elongate, depressed, rather narrow, piceous, the head in front and the oral organs reddish-testaceous, clothed with very short ashy pubescence, slightly shining. Head densely and very rugosely punctured; antennæ (♀) stout, rather short, extending a little beyond the base of the elytra, fusco-ferruginous, the three basal joints and the apical one ferruginous, joint 3 nearly twice as long as 4, 4–10 decreasing in length but increasing in width, 10 about as long as broad; prothorax narrow, subquadrate, broadest at the base and there very much narrower than the elytra, a little broader than long, the sides feebly rounded and gradually narrowing from the base, the disc canaliculate towards the base and apex and with a broad shallow oblique impression on each side behind the middle, the impressions confluent at the base, the basal foveæ distinct, the surface densely and rugosely punctured (more finely so than the head); elytra parallel to about the middle, the surface subcoriaceous, with widely scattered moderately coarse punctures arranged in very irregular rows, the flat interspaces shallowly, minutely, and closely punctured, the apices slightly pointed; beneath very densely punctured; legs entirely testaceous.

Length $6\frac{1}{4}$ millim.; breadth 2 millim. (♀.)

Hab. Mexico, Villa Lerdo in Durango (*Höge*).

One female example. This species is allied to the North-American *M. quadricollis*, Horn, an insect found upon the flowers of *Agave* in California and New Mexico; it differs, however, in several particulars from the two published descriptions of *M. quadricollis*. *M. depressus* is more depressed than any other member of the genus known to me; the male doubtless possesses differently formed antennæ.

The following genera are provisionally referred to the Melandryidæ. They are in some respects intermediate between the Melandryidæ and the Pythidæ; but they do not agree in several of their characters with either of these families as defined by most authors. The coarsely granulated eyes, which are deeply emarginate in front in *Polypria* and entire in the others, and immarginate thorax, the latter narrower than the elytra, bring these genera near to some of the heterogeneous forms (*Boros* &c.) at present included in the Pythidæ, from which they differ in the more or less broadly lobed penultimate joint of the tarsi. *Eurypus*, Kirby, a genus overlooked by Lacordaire, is one of these intermediate forms; and *Ischyomius*, Chevr., would, as already stated, doubtless, be better placed here.

POLYPRIA.

Polypria, Chevrolat, Rev. et Mag. Zool. 1874, p. 330.

This interesting genus contains a single species, and is apparently peculiar to Central America. *Polypria* was referred by its describer to the Othniidæ, and stated to resemble *Derestenus*, a genus of Cleridæ. It cannot be included in the Othniidæ owing to the widely open anterior coxal cavities (not mentioned by Chevrolat) and other important differences of structure. The genus seems best placed in the Melandryidæ. The anterior coxæ are contiguous; the eyes are exceedingly large, deeply emarginate in front, and very coarsely granulated; the thorax is immarginate at the sides; the tarsi are heteromerous (not five-jointed, as stated by Chevrolat), the outer joints broad and lobed beneath, the penultimate one very broadly so, the claws appendiculate; and the antennæ with joints 4–10 strongly serrate. *Polypria* is closely allied to *Eurypus*, Kirby, a heteromerous genus doubtfully included in the Cleridæ by Spinola*; in the latter, however, the eyes are not emarginate in front.

1. **Polypria crux-rufa.** (Tab. V. figg. 1; 1 *a*, labium; 1 *b*, maxilla and maxillary palpus.)

Polypria crux-rufa, Chevr. Rev. et Mag. Zool. 1874, p. 330[1].

Hab. Mexico[1], Parada (*Sallé*), Cerro de Plumas (*Höge*); British Honduras, Belize (*Blancaneaux*); Guatemala, Paso Antonio, San Gerónimo, Panzos (*Champion*); Nicaragua, Chontales (*Janson*).

This insect, though widely distributed, appears to be everywhere rare, single examples only having been obtained in each locality. The broad sutural stripe of the elytra, which is widened out behind the middle into a common transverse band extending to

* This genus is very fully and accurately redescribed by Spinola, *cf.* Essai Monogr. Clérites, Suppl. pp. 173–177; it contains a single species from Brazil.

the lateral margin, and more or less dilated at the base and apex, leaving two large lateral spots flavous or fulvous, is described by Chevrolat as rufous: in our specimens the spots are each surrounded by a rather broad piceous line, the space within the piceous lines being rufous.

CONOMORPHUS.

Last joint of the maxillary palpi long, nearly twice as long as the third, moderately broad, subsecuriform, and with its apical side about as long as the inner, and very much shorter than the outer side, that of the labial palpi long, widening outwardly, and with its apex subtruncate; mentum transverse, broadest behind, the anterior angles somewhat obtuse; maxillæ with the inner lobe largely developed and broad; mandibles with the apex broad and feebly bifid; head large, slightly narrowed behind, the epistoma not defined, the antennary orbits very little raised (more distinct in *C. gracilicornis*); eyes moderately convex, rounded, entire, exceedingly large, and occupying the whole of the side of the head, narrowly or widely separated above, much more distant beneath; antennæ more or less slender, in some species scarcely reaching the base of the prothorax, and in others extending beyond it, joint 3 twice as long as 2, 4 shorter than 3, joints 4–10 usually decreasing in length and increasing in width (in some species becoming triangular), each widening towards their apex, 11 ovate, somewhat pointed, and much longer than 10; prothorax as long as or longer than broad, subquadrate, subcylindrical, usually a little flattened on the disc, the sides immarginate or very obsoletely margined behind, the base feebly bisinuate or nearly straight, and with more or less distinct foveæ, the foveæ connected by a basilar groove; scutellum flat, transverse, or as long as broad; elytra exceedingly long, wider than the prothorax at the base, usually widest at or beyond the middle, the humeri rounded; anterior coxæ cylindrical, strongly exserted, contiguous, the cavities open behind, but closed laterally; mesosternum long, broadly and largely extended anteriorly, and closing the anterior coxal cavities, the coxæ rather narrowly separated, the cavities closed; metasternum long, largely developed and convex, without median groove; posterior coxæ transverse, rather widely separated by the produced and acutely triangular intercoxal process; abdomen with five visible segments, the third and fourth with coriaceous hind margin; legs moderately long; the penultimate joint of all the tarsi broadly lobed beneath; tibial spurs small, the first joint of the hind tarsi about as long as or rather longer than the following joints united; claws with the basal half broadly and angularly dilated within; body very elongate, widest behind and subconical, or subcylindrical, winged.

This genus so closely resembles *Stilpnonotus* (=*Calophthalmus*, Thoms.), that it is with considerable hesitation I refer it to a different family, the open anterior coxal cavities notwithstanding (not easily seen unless the prothorax is detached); the only other apparent discrepancies between *Conomorphus* and *Stilpnonotus* being the more slender antennæ, more convex eyes, and flat scutellum, and in the thorax having more or less distinct basal foveæ, the latter connected by a basilar groove. The open anterior coxal cavities being regarded by most authors as a character of paramount importance for the purposes of classification, these genera are here referred to different families; but at the same time it is necessary to call attention to these closely allied forms, the one with open, the other with closed cavities. *Conomorphus* approaches *Eurypus* in some of its characters, from which it differs in its more conical and more cylindrical shape, more slender antennæ, larger and less convex eyes, &c.; and in general facies it somewhat resembles *Boros*, a genus of Pythidæ. I include in it three species from Central America and two from Parana (one of which is described in a

footnote on p. 100); and *Calophthalmus tenuicornis*, Fairm., from Minas Geraes, doubtless belongs to the same genus. As in *Stilpnonotus*, a short space on either side of the suture of the elytra near the apex is usually darker in colour, and the suture at this part longitudinally impressed on each side. *C. pilosus* (from which the description of the mouth-parts is taken) may be considered as the type of the genus. The sexes do not exhibit any external distinguishing characters.

Our specimens of *C. pilosus* and *C. brevicornis* were beaten from the withered branches of fallen trees.

1. **Conomorphus pilosus.** (Tab. V. figg. 2; 2 *a*, labium; 2 *b*, maxilla and maxillary palpus.)

Subcylindrical, narrowing anteriorly, piceo-castaneous, sometimes with a slight æneous lustre, moderately shining, somewhat thickly clothed with rather long appressed hairs. Head very closely and rather coarsely punctured; eyes black, widely separated; antennæ slender, extending to a little beyond the base of the prothorax, varying in colour from piceous to ferruginous, joints 4–10 subtriangular, decreasing in length and increasing in width, but all much longer than broad, 11 ovate, and much longer than 10; prothorax subquadrate, as long as broad, the sides immarginate, the disc a little depressed, more or less distinctly canaliculate (more deeply so behind), and sometimes with a shallow oblique impression on each side towards the base, the basal foveæ deep, extending obliquely upwards for a short distance, and usually connected by a shallow groove, the surface densely, subrugulosely, and somewhat coarsely punctured; scutellum flat, densely punctured; elytra gradually widening to about the middle and thence to the apex converging, slightly depressed on each side within the humeri, the disc shallowly transversely impressed some distance below the base, the suture for a short distance longitudinally impressed on each side near the apex, a narrow space external to this more or less piceous in colour, the surface rather more finely and much more sparsely punctured than the prothorax, more closely so towards the base, the posterior half often with traces of very shallow longitudinal grooves; beneath shining, the ventral surface and metasternum closely and finely punctured, the rest coarsely and densely so; legs more or less piceous, the base of the femora and the basal half and the apex of the tibiæ often reddish.

Length 7–11½ millim.

Hab. Guatemala, Cerro Zunil 4000 feet (*Champion*).

Six examples. This species is no doubt allied to *Calophthalmus tenuicornis*, Fairm.

2. **Conomorphus brevicornis.** (Tab. V. fig. 3.)

Subconical, fulvo-testaceous, the head and prothorax of a more ferruginous colour, the latter with the sides broadly, and the elytra with a sinuous sublateral stripe, extending from the shoulder to about the middle and there turning abruptly inwards and then again outwards, enclosing a triangular lateral patch (this being flavous in colour in one example), and sometimes a common sutural patch just before the apex, piceous or black, slightly shining, the surface clothed with short appressed pubescence. Head very closely and finely punctured; eyes black, rather widely separated; antennæ yellow, short, scarcely reaching the base of the prothorax, slender, widening outwardly, joints 4–10 gradually becoming more triangular in shape, 7–10 very distinctly so, 9 and 10 as broad as long, 11 much longer than 10 and ovate; prothorax cylindrical, subquadrate, as broad as long, the sides very feebly rounded or almost straight, and very obsoletely margined behind, the disc longitudinally impressed in the middle behind and a little flattened, the base with a well-defined groove connecting the short basal foveæ, the surface very densely and finely punctured and subopaque; elytra gradually widening to the middle and thence to the apex converging, very closely and finely punctured throughout, the suture slightly depressed just before the apex; beneath very closely punctured; legs flavous or ferruginous.

Length 4–5½ millim.

Hab. Guatemala, El Reposo 800 feet (*Champion*); Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Two examples only. In coloration this insect resembles *Eurypus rubens*, Kirby. An allied species is found at Parana *.

3. **Conomorphus gracilicornis.** (Tab. V. fig. 4.)

Subcylindrical, narrow, scarcely wider behind, a little flattened above, castaneous, the prothorax and elytra much stained with piceous, the suture of the latter with a common longitudinal black patch near the apex, the surface sparsely pubescent and slightly shining, the prothorax opaque. Head very large, very closely and not very finely punctured, the eyes black and rather narrowly separated, the palpi testaceous; antennæ flavous, very slender, comparatively long, extending considerably beyond the base of the prothorax, joints 4–10 all much longer than broad and each gradually widening towards their apex, 7–10 about equal in length, 11 ovate, very much longer than 10, and almost pointed; prothorax subquadrate, as long as broad, the disc a little flattened and unimpressed, the sides immarginate, the base with a well-defined groove connecting the short basal foveæ, the surface very densely and subrugulosely punctured; elytra subparallel, scarcely wider at the middle than at the base, very closely and finely punctured; beneath piceous, the venter piceo-castaneous, very closely punctured; legs testaceous, the femora stained with piceous.

Length $3\frac{1}{2}$ millim.

Hab. Guatemala, San Juan in Vera Paz 2000 feet (*Champion*).

One example only. This small narrow species is somewhat doubtfully included in *Conomorphus*; it agrees, however, in its chief characters with the other members of the genus, from which it differs in its more parallel and more cylindrical shape, rather larger head, more narrowly separated eyes, more prominent (but small) antennary orbits, and longer and much more slender antennæ.

CLEODÆUS.

Very near *Conomorphus* and differing as follows:—The last joint of the maxillary palpi three times as long as the third joint, subcultriform, its apical and outer sides about equal in length and each nearly twice as long as the inner side, the inner angle rectangular; the last joint of the labial palpi rather large and ovate, with the apex truncate, the second joint stout; head very broad, strongly narrowed behind, with small but rather prominent antennary orbits; eyes very large, convex, not very coarsely granulated, distant; antennæ about reaching the base of the prothorax, joint 1 long and stout, 2 short and stout,

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* **Conomorphus flavicornis.**

Subconical, fulvo-castaneous, the head and prothorax of a more ferruginous tint, the latter and the elytra each with a black sublateral stripe, the stripe on the elytra extending to a little beyond the middle, and with its outer edge interrupted posteriorly by an extension inwards of the ground-colour (this part flavous in one example), the suture also marked with black or piceous near the apex, the surface sparsely pubescent and moderately shining. Head very closely and rather coarsely punctured; antennæ as in *C. brevicornis*; prothorax longer than broad, the sides immarginate and almost straight, the surface densely and rugulosely punctured, the disc very shallowly and obliquely impressed on each side behind, the base with a deep groove connecting the short basal foveæ; elytra transversely impressed on each side at the base, closely and moderately finely punctured; legs ferruginous.

Length $6\frac{2}{3}$–7 millim.

Hab. South America, Parana (*coll. F. Bates*). Two examples.

3 longer and much more slender than 2, 4 shorter and a little wider than 3, 5 very much wider than 4, 5–10 very strongly transverse, angularly dilated within, and increasing in width outwardly, 7–10 nearly twice as broad as long, 11 the width of and twice as long as 10; prothorax transverse, immarginate, with distinct basal foveæ; scutellum strongly transverse; elytra very long, wider than the prothorax, widening to the middle and then narrowing to the apex; anterior coxæ contiguous, the cavities open behind; intermediate coxæ very narrowly separated; legs rather short, moderately slender; claws towards the base angularly dilated within; body very elongate, widest behind, rather depressed above; the rest as in *Conomorphus*.

This genus is proposed for a single species from the State of Panama. The long and subcultriform apical joint of the maxillary palpi, differently formed antennæ, and short thorax readily distinguish *Cleodæus* from *Conomorphus*, to which it is closely allied. The form of the antennæ approaches that of *Stilpnonotus* and *Eurypus*, but in both these genera joints 4–10 of the antennæ are dilated within; in *Cleodæus* joints 5–10 only are widened, and 3 and 4 are more slender than 2 or 5. The head is more narrowed behind than in *Conomorphus*.

1. **Cleodæus rugiceps.** (Tab. V. figg. 5; 5 *a*, labium; 5 *b*, maxilla and maxillary palpus.)

Piceous-black, sparsely clothed with brownish pubescence, slightly shining, the oral organs testaceous. Head densely and coarsely punctured, transversely flattened between the eyes; antennæ black, the basal joint testaceous; prothorax transverse, very little narrower at the apex than at the base, the sides slightly arcuate in front and almost straight or very feebly sinuate behind, the hind angles acutely rectangular, the disc with a large oblique rather shallow impression on each side about the middle, the base feebly bisinuate, the surface densely and very minutely punctured (very much more finely so than the head); scutellum densely punctured; elytra with traces of very shallow longitudinal grooves, densely, minutely, and uniformly punctured; beneath closely punctured; legs (including the coxæ) testaceous, the tarsi a little darker in colour.

Length 4–4½ millim.

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Two examples, agreeing exactly with each other. The head is very much more coarsely punctured than the thorax or elytra and is transversely flattened or depressed between the eyes, the latter being less coarsely granulated than in *Conomorphus*.

PHYSCIUS.

Last joint of the maxillary palpi broadly triangular, its apical side very little shorter than the outer and about one third longer than the inner side, the inner angle subrectangular; last joint of the labial palpi rather slender, elongate-pyriform, the narrow end outwards; mentum strongly transverse; mandibles entire at the apex; head inclined, large and broad, broader than the prothorax, narrowed behind, less abruptly so in the female, the epistoma not defined, the antennary orbits very little raised; eyes large, moderately convex, coarsely granulated, entire, occupying the whole of the side of the head, not very widely separated in the male, more distant in the female; antennæ slender, extending a little beyond the base of the prothorax, joint 3 narrower and longer than 2, joints 4–10 angularly dilated within, 6–10 transverse, 11 nearly twice as long as 10, ovate, and with the apex rather blunt; prothorax transverse, immarginate at the sides, with distinct basal foveæ; scutellum small; elytra moderately long, much wider than the prothorax, widening from the base to far beyond the middle, very obtuse behind; anterior coxæ contiguous, the cavities open behind but closed laterally; intermediate coxæ very narrowly

separated, the cavities almost closed; metasternum convex; legs slender, rather short, the tibial spurs very small, the penultimate joint of all the tarsi lobed beneath; body subconical, moderately long, rather convex, winged.

A single species from Central America is referred to this genus. *Physcius* is closely allied to *Cleodæus*, but differs from it in the form of the maxillary and labial palpi and also in that of the antennæ. *P. conicus* has much the facies of some of the more elongate forms of *Xylophilus*, from which genus, apart from other characters, it may be distinguished by the head not being sharply cut off behind. The antennæ have joints 4–10 short and angularly dilated within. The chief character of the genus, however, is the elongate-pyriform (almost subulate) apical joint of the labial palpi.

1. **Physcius conicus.** (Tab. V. figg. 6; 6 *a*, labium; 6 *b*, maxilla and maxillary palpus.)

Piceous-black or piceous, the sutural region of the elytra sometimes obscure castaneous, the surface clothed with short ashy pubescence and slightly shining, the oral organs more or less testaceous. Head coarsely and rather closely punctured; antennæ yellow; prothorax transverse, as wide at the apex as at the base, the sides very feebly rounded anteriorly and slightly sinuate behind or almost straight, the hind angles rectangular, the disc with an oblique impression on each side about the middle, the impressions only separated behind by an indistinct median ridge (more distinct in some examples than in others), the surface closely and finely punctured; elytra closely and finely punctured and with traces of very shallow longitudinal grooves, the suture slightly depressed before the apex; beneath densely and finely punctured, the metasternum more sparsely and more coarsely so; legs (including the coxæ) yellow, the femora sometimes a little darker.

Length 2–2⅔ millim. (♂ ♀.)

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Var. Larger, the eyes not so coarsely granulated, the head, except a patch on the middle of the vertex, reddish-testaceous. (♀.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

Numerous examples of the type, one only of the variety.

THISIAS.

Last joint of the maxillary palpi long and narrow, gradually widening outwardly, and very obliquely cut off at the apex, the apical side about as long as the inner and not much more than half the length of the outer side; last joint of the labial palpi cylindrical, the apex truncate; mentum strongly transverse, the sides rounded; ligula prominent, as broad in front as the mentum, its anterior margin broadly and shallowly arcuate-emarginate; mandibles feebly cleft at the apex; head horizontal, scarcely narrowed behind, the epistoma limited posteriorly by a shallow transverse groove and laterally by a deeper longitudinal one, the antennary orbits not raised; eyes oblong, entire, lateral, moderately large, coarsely granulated, feebly convex and not very prominent, and very widely separated above and beneath; antennæ short, not reaching the base of the prothorax, moderately stout, joint 3 more slender and rather longer than 2, joints 4 and 5 subequal and each shorter than 3, 5 wider than 4, 6–10 the broadest and angularly dilated within, all rather broader than long, 11 ovate and about twice as long as 10; prothorax transverse, with deep basal foveæ, the sides immarginate; scutellum rather small; elytra wider than the prothorax, moderately long, widening from the base to beyond the middle, very obtuse

behind; anterior coxæ contiguous, the cavities open behind and closed laterally; intermediate coxæ narrowly separated, with distinct trochantin; hind coxæ transverse, rather widely separated by the broad and acutely triangular intercoxal process; legs rather short, the tibial spurs very small, the penultimate joint of all the tarsi broadly lobed beneath, the first joint of the hind tarsi not so long as the other joints united, the claws towards the base angularly dilated within; body obovate, moderately elongate, a little depressed above, winged.

This distinct genus includes a single species from Central America. It is not closely allied to any other yet described, though approaching *Eurypus* in some of its characters.

Most of the specimens obtained of *T. marmoratus* were found in forest-clearings, about the withered branches of fallen trees or upon leaves.

1. **Thisias marmoratus.** (Tab. V. figg. 7; 7 *a*, labium; 7 *b*, maxilla and maxillary palpus.)

Varying in colour from fulvo-testaceous to reddish-castaneous, the entire upper surface to a greater or less extent irregularly spotted or marbled with piceous or black, slightly shining, and somewhat thickly clothed with ashy or brownish pubescence. Head closely and not very finely punctured; antennæ flavous or testaceous; prothorax moderately transverse, rather wider at the base than at the apex (more distinctly so in some examples than in others), the sides angularly dilated about the middle, the base very feebly bisinuate, the disc with a more or less distinct oblique groove on each side about the middle and sometimes deeply longitudinally impressed in the middle at the base, the basal impression usually connected with the deep foveæ by a fine groove, the surface very closely and finely punctured; elytra with shallow longitudinal grooves, punctured like the prothorax, the suture slightly depressed before the apex; beneath castaneous or testaceous, more or less stained with piceous, very closely and finely punctured, the metasternum more sparsely, the head and the flanks of the prothorax more coarsely and densely so; legs testaceous, the femora sometimes a little darker.

Length $3\frac{1}{2}$–$5\frac{1}{3}$ millim.

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*); Guatemala, Volcan de Atitlan, Pantaleon, Mirandilla (*Champion*); Panama, Volcan de Chiriqui, San Lorenzo, Peña Blanca (*Champion*).

Numerous examples.

Fam. PYTHIDÆ.

This is a family of small extent, and, like the Melandryidæ, more numerously represented in temperate than in tropical regions. From Central America we have to enumerate seven species only, six of these being described as new. *Homalirhinus*, Chevr. (=*Rhinomalus*, Gemm., =*Xenorhinus*, Lec. & Horn), species of which are not uncommon in Central and South America, was referred to this family by Chevrolat (and this position is adopted in Gemminger and Harold's Catalogue); but this, as pointed out by Leconte and Horn [Class. Col. N. Am. p. 134 (1883)], is a mistake, the genus, in reality, belonging to the Cucujidæ. *Cononotus* may eventually be found to inhabit North-west Mexico; the three species described are from California, and are said to occur under stones. The other members of this family are found under bark or about the dead branches of trees.

* *Head not rostrate in front.*

CRYMODES.

Crymodes, Leconte in Agassiz's Lake Superior, p. 232, footnote no. 28 (1850); Lacordaire, Gen. Col. v. p. 526; Leconte & Horn, Class. Col. N. Am. p. 402 (1883).
Cryphæus, Leconte, op. cit. t. 8. figg. 11, 11 *a*, *b*.

This genus was described by Leconte under the name of *Crymodes* and figured under that of *Cryphæus*, both names being preoccupied, the former in Lepidoptera and the latter in Coleoptera; it might be renamed *Lecontia*. The single known species is found under bark.

1. Crymodes discicollis.

Crymodes discicollis, Lec. in Agass. Lake Superior, p. 233[1].
Cryphæus disicollis (sic), Lec. op. cit. t. 8. figg. 11, 11 *a*, *b*.

Hab. North America, British Colombia, Canada, Lake Superior[1].—Mexico, Sierra Madre de Durango (*Flohr*).

Dr. Horn, who has kindly forwarded a specimen for comparison, informs me that he has examples of this species from above Canada in the north to the lower U. S. border in New Mexico, and that the insect probably follows the Sierra Madre southwards at a high altitude (10,000 feet).

The fragmentary specimen forwarded by Mr. Flohr is 21 millim. in length.

SPITHOBATES.

Last joint of the maxillary palpi broad and securiform, that of the labial palpi cylindrical or narrowly ovate; inner lobe of the maxillæ furnished with a long sharp claw; mandibles bifid, not or scarcely denticulate within; mentum very broad and short, about two and a half times as broad as long, the front angles rounded, the hind angles obtuse; ligula broad and very prominent; head short, broad, rather convex, the epistoma not defined, the sides of the front obliquely converging, the apex truncate, the labrum prominent; eyes convex, entire, large or moderately large, coarsely granulated; antennæ extending to a little beyond the base of the prothorax, with the joints from the fifth broader than the preceding three, or gradually widening outwardly and with joints 9–11 longer and wider than those preceding, the apical joint elongate-ovate, the basal joint stout; prothorax longer than broad, rather convex, strongly constricted behind, much narrower at the base than at the apex, the sides (except at the base) more or less denticulate, the base truncate and margined; scutellum transverse; elytra moderately long, wider than the prothorax, parallel in their basal half and narrowing beyond, and with rows of punctures; anterior coxæ contiguous; intermediate and hind coxæ narrowly separated, the former without visible trochantin; fifth ventral segment as long as the fourth; legs moderately long, the femora rather stout, the tibiæ with distinct spurs, the penultimate joint of all the tarsi small and short, the first joint of the hind tarsi rather long; body convex, elongate, winged, sparsely clothed with decumbent hairs (which are serially arranged on the elytra), the upper surface, legs, and antennæ also with scattered, long, erect bristly hairs.

This genus is proposed to include two species from Central America. These differ a little *inter se* in the form of the antennæ and in the size of the eyes; but in other

respects, more especially in the structure of the mouth-parts, they agree well with each other. *Spithobates* differs from *Lissodema* and *Salpingus* and their allies in the broad apical joint of the maxillary palpi, convex and non-rostrate head (the epistoma confounded with the front), coarsely faceted eyes, &c., and also in its more elongate shape. In both species the inner lobe of the maxillæ is furnished with a sharp claw; and the upper surface of the body and the legs and antennæ are clothed with very long, erect, bristly hairs (which are easily rubbed off) in addition to the short decumbent pubescence. The sides of the thorax are denticulate as in *Lissodema*, but more sharply so; the last-mentioned genus does not appear to have been detected as yet in North America.

Upper surface unicolorous; antennæ with joints 5–10 *broader than those preceding and subequal,* 11 *elongate-ovate; eyes large.*

1. **Spithobates setosus.** (Tab. V. figg. 8; 8 *a*, labium; 8 *b*, maxilla and maxillary palpus.)

Elongate, moderately convex, piceo-castaneous or castaneous, shining, sparsely clothed above and beneath with ashy decumbent hairs, the upper surface and the legs and antennæ also with scattered long, erect, black, bristly hairs. Head somewhat thickly and rather coarsely punctured at the sides, sparsely so along the middle; eyes large and coarsely faceted; antennæ with joints 5–10 broader than 2–4, each widened towards its apex and longer than broad, 11 ovate and nearly twice as long as 10, 5–11 more or less stained with piceous, the rest ferruginous; prothorax with five very prominent teeth on each side (the anterior one forming the anterior angle the shortest, the hinder one placed at some distance before the base and sometimes followed by a shallow oblique groove extending inwards), the apex (narrowly), the base (rather broadly), and a longitudinal space down the middle of the disc smooth, the rest of the surface coarsely and irregularly punctured, the punctures longitudinally or sinuously confluent; scutellum densely punctured; elytra a little depressed below the scutellum and also with a shallow transverse depression on the middle of each below the base, the basal portion with rather coarse punctures arranged in irregular rows, the punctures thence to the apex very much finer and shallower; beneath thickly and somewhat coarsely punctured, the metasternum very coarsely so at the sides; legs piceo-castaneous, the tarsi lighter, the tibiæ curved a little outwards.

Length $3\frac{3}{4}$–5 millim.

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Numerous examples.

Elytra spotted; antennæ with joints 9–11 *longer and broader than those preceding; eyes smaller.*

2. **Spithobates maculatus.** (Tab. V. fig. 9.)

Moderately elongate, convex, shining, piceous, the head and prothorax piceo-castaneous or castaneous, the elytra each with a large spot before and another behind the middle, not reaching the suture, flavo-testaceous; sparsely clothed above and beneath with ashy decumbent hairs, the upper surface, legs, and antennæ also with scattered, long, black, erect, bristly hairs. Head coarsely and somewhat closely punctured; eyes rather small; antennæ more or less ferruginous, joints 2–8 very gradually widening outwardly, 9 and 10 each much broader and longer than 8, 11 elongate-ovate and nearly twice as long as 10; prothorax with four or five not very distinct teeth on each side, the hinder one usually the longest and often followed by

an oblique groove extending inwards, the surface coarsely, closely, and irregularly punctured, the punctures longitudinally or sinuously confluent, a longitudinal space down the middle of the disc impunctate; scutellum densely punctured; elytra with rows of coarse punctures, the punctures becoming very much finer on the apical third; beneath closely and rather coarsely punctured; legs more or less testaceous.
Length $2\frac{1}{2}$-$3\frac{2}{3}$ millim.

Hab. Mexico, Jalapa, Cerro de Plumas (*Höge*).

Var. *a*. Head and prothorax usually of a more reddish tint; the latter with the punctures less confluent and in some examples quite separate from each other; the elytra marked as in the type.

Hab. Guatemala, San Juan in Vera Paz (*Champion*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Var. *b*. The elytra with a narrow transverse flavo-testaceous band below the base (not reaching the suture), the second spot not indicated; the punctures on the prothorax more or less confluent, but not so coarse as in the type; the legs rather darker, the femora in one example stained with piceous.

Hab. Guatemala, Cerro Zunil (*Champion*).

Numerous examples of the type and of the var. *a*, four only of the var. *b*. In the long series of specimens the extreme forms of this variable insect are connected by intermediate examples; and they cannot be regarded as more than local races of one species. The teeth at the side of the thorax are sharper in some examples than in others (but they are never so strong as in *S. setosus*), the hinder one being sometimes very prominent; occasionally they are in part obsolete. The punctures on the elytra are placed in much more regular rows than in *S. setosus*, and the rows are distinct to beyond the middle. *S. maculatus* is also much smaller and less elongate than *S. setosus*; it somewhat resembles *Lissodema denticolle*, Gyll., an insect inhabiting Northern Europe.

SOSTHENES.

Last joint of the maxillary palpi ovate, rather broad, obliquely truncated at the apex; mandibles bifid; mentum twice as broad as long; head very broad, short, rather convex, deeply sunk into the prothorax, not rostrate in front, the epistoma very short and limited behind by a transverse groove, the labrum prominent; eyes convex, prominent, rather large; antennæ moderately stout, short, not reaching the base of the prothorax, 11-jointed—1 stout, ovate, 2 shorter and more slender than 1, 3 more slender and a little longer than 2, obovate, 4–8 gradually decreasing in length and submoniliform, 9 nearly twice as wide as and much longer than 8, transverse, 9–11 forming a moderately stout three-jointed club, 10 transverse, 11 ovate and longer than 10; prothorax convex, very broad, transverse, narrower at the base than at the apex, the sides immarginate, very strongly rounded, and constricted behind, the surface without depressions; scutellum very short, strongly transverse; elytra rather long, considerably wider than the prothorax at the base, only a little wider than the latter in its broadest part, broadest about the middle, sparsely punctured; anterior coxæ contiguous; intermediate and hind coxæ moderately separated; legs moderately stout, the tibiæ with distinct spurs, the penultimate joint of all the tarsi small; body winged, glabrous; form elongate, subparallel, rather convex.

This genus contains a single species of small size from Guatemala.

Sosthenes is closely allied to *Salpingus*, but differs from it in the head and thorax being broader; the head is shorter, non-rostrate in front, more convex behind, and

more deeply sunk into the thorax, the latter differently shaped; the elytra are only a little wider than the widest part of the thorax; the eyes rather larger; and the antennæ shorter. A single example only having been captured, we have not ventured to dissect the parts of the mouth.

1. **Sosthenes dyschirioides.** (Tab. V. fig. 10.)

Of a brilliant æneous tint, very shining. Head and prothorax coarsely and somewhat thickly punctured, the latter widest at the middle; elytra with rows of shallow distant punctures on the basal half of the disc, for the rest smooth; beneath piceo-æneous, shining, the metasternum and metasternal side-pieces almost smooth, the ventral surface very finely, the rest coarsely, punctured; legs, oral organs, and antennæ ferruginous.

Length 3 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

** *Head rostrate in front.*

Sphaeriestes Steph.

SALPINGUS.

Salpingus, Gyllenhal, Ins. Suec. ii. p. 640 (1810); Lacordaire, Gen. Col. v. p. 528.
Sphæriestes, Stephens, Ill. Brit. Ent., Mandib. iv. p. 218 (1831).

Species of this genus have been described from Europe, North Africa, Madeira, Madagascar, Japan, New Zealand, North America, and Chili, the large majority being from the temperate zone. We have now to add one from the Los Altos region of Guatemala.

1. **Salpingus quichensis.** (Tab. V. fig. 11.)

Dark brownish-bronze, shining. Head rather narrow, short, broadly and shallowly transversely impressed in front, the epistoma broadly truncate, the surface coarsely and closely punctured; antennæ piceous, the three basal joints ferruginous, joints 9–11 larger and wider than those preceding and forming a three-jointed club; prothorax convex, narrow, the sides a little rounded anteriorly and constricted behind, the disc with a very shallow oblique impression on each side about the middle, the surface closely and still more coarsely punctured than the head; elytra very much wider than the prothorax, widest beyond the middle, coarsely and irregularly striate-punctate, the punctures finer at the apex, the interstices flat, the first with numerous, and the third, fifth, and seventh with a few finer impressions, the scutellar region more irregularly punctured; beneath and the oral organs and legs piceous, the extreme base of the tibiæ and the tarsi lighter.

Length 3 millim.

Hab. GUATEMALA, Quiche Mountains 8000 feet (*Champion*).

A single example, found in the pine-forest region. *S. quichensis* is, apparently, not closely allied to any other species of the genus yet described. It has the head and thorax comparatively narrow and closely and coarsely punctured, the punctures separate one from another; the head is short and only slightly rostrate in front; and the antennæ have the apical three joints widened into a club.

LANTHANUS.

Last joint of the maxillary palpi subcylindrical, that of the labial palpi narrowly ovate; inner lobe of the maxillæ longer and not narrower than the outer lobe; mandibles bifid and with a short tooth before the apex beneath, obsoletely denticulate within; mentum strongly transverse, about twice as broad as long, the apical angles broadly rounded, the hind angles rectangular; ligula membranous and comparatively small; head wide, flattened and produced in front into a short broad beak, the labrum prominent; eyes small, convex, very prominent; antennæ reaching to a little beyond the base of the prothorax, inserted in a cavity in the sides of the front, 11-jointed—1 small and very short (scarcely visible from above or beneath), 2 large and ovate, more than twice as long as and very much stouter than 1, 3 as long as but much more slender than 2, obovate, 4–8 decreasing in length and slightly increasing in width, 9 about three times as wide and more than twice as long as 8, 9–11 forming a very large loosely-articulated three-jointed club, 11 broad ovate, a little longer than 10; prothorax transversely convex, broader than long, about as wide at the base as at the apex, the sides very finely denticulate and somewhat rounded, the base and apex truncate, the base narrowly grooved within on each side (the groove not always distinct), the disc (in one species) with a deep oblique fovea on each side behind, the surface punctured; scutellum transversely triangular; elytra short and broad, convex, ovate, wider than the prothorax at the base, bluntly rounded at the apex, smooth; anterior coxæ contiguous; intermediate coxæ moderately separated; posterior coxæ widely separated; first ventral segment long, the intercoxal process broad, rounded in front; fifth segment short; legs slender, rather short, the tibiæ with distinct spurs, the penultimate joint of all the tarsi small; body winged, very shining, clothed with a few scattered erect hairs; form oblong-ovate or obovate, convex.

Two small species from Central America are referred to this genus. One of these is contained in the Sallé collection; and it is labelled with the MS. name of *Lanthanus variegatus*, Reiche, and placed in the Lathridiidæ. *Lanthanus*, however, has 5-, 5-, 4-jointed tarsi, and is undoubtedly allied to *Lissodema*, from which its more strongly clubbed antennæ, widely separated hind coxæ, and other characters abundantly distinguish it. The antennæ at first sight appear to be 10-jointed, the small basal joint being partly hidden in a cavity in the sides of the front (and not easily seen unless the entire organ is detached), and the second joint very large. The elytra are smooth and almost destitute of sculpture (exceedingly minute scattered punctures only being visible under a very strong lens). The thorax is thickly punctured; and in one species has a very deep fovea on each side of the disc behind, this being only feebly indicated in the other. *L. variegatus* was found in abundance by myself in Guatemala, beneath the thin scaly bark of old posts and in company with various subcortical Carabidæ and Histeridæ.

1. **Lanthanus variegatus.** (Tab. V. figg. 12; 12 *a*, labium; 12 *b*, maxilla and maxillary palpus; 12 *c*, antenna.)

Lanthanus variegatus, Reiche, in coll. Sallé.

Oblong ovate, æneous or blackish-æneous, the front of the head of a more testaceous tint, the elytra each with a transverse spot before and another behind the middle, not reaching the suture, pallid testaceous; very shining, and clothed (especially on the prothorax) with fine scattered erect hairs. Head finely and somewhat thickly punctured; antennæ with the basal joints testaceous, the rest piceous or black, in some examples the club only black; prothorax strongly transverse, rather more coarsely punctured than the head, and with a very deep oblique fovea on each side of the disc behind; scutellum with a few punctures; elytra smooth; beneath varying in colour from piceous to piceo-testaceous, the metasternum, metasternal side-pieces, and venter almost smooth, the rest thickly and rather coarsely punctured; legs testaceous, the femora and tibiæ often more or less piceous.

Var. The entire upper surface of a brilliant æneous or golden-bronze tint; the elytra without spots.

Length $1\frac{1}{3}$–2 millim.

Hab. Mexico, Teapa (*Sallé*); British Honduras (*Blancaneaux*); Guatemala, Cerro Zunil, Zapote, San Gerónimo, Purula (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

Found in abundance at Zapote, sparingly elsewhere. The spotted and unicolorous forms were collected together in about equal numbers at Zapote and also in British Honduras. The Mexican examples are rather larger than the others. *L. variegatus* varies considerably in size, as well as in colour; the unicolorous variety is of a more brilliant tint than the spotted form. One of the latter from Zapote is figured.

2. **Lanthanus nitidus.** (Tab. V. fig. 13.)

Obovate, golden-bronze, very shining. Head finely and somewhat thickly punctured; antennæ with joints 1–8 testaceous, the club piceous; prothorax moderately transverse, the basal groove deeply impressed laterally, the disc with a very shallow almost obsolete oblique groove on each side behind, the surface sparsely and moderately coarsely punctured; elytra very much broader than the prothorax at the base, smooth; beneath piceo-æneous; legs testaceous, the femora darker.

Length 2 millim.

Hab. Mexico, Cerro de Plumas (*Höge*).

One example only. This species is of more obovate shape than *L. variegatus*; the thorax has the oblique fovea on each side of the disc barely indicated, and the basilar groove more deeply impressed laterally; and the elytra are relatively broader.

Fam. ŒDEMERIDÆ.

This is a family containing a large number of species in all parts of the World, and most Oceanic islands possess one or more representatives. No systematic attempt has hitherto been made to deal with the very numerous species inhabiting the warmer parts of the globe, an immense number of which exist in collections, those of Europe and North America only having been worked out as yet; and the comparatively few species described from tropical regions have been in many cases erroneously referred to European genera. A large number of species are now recorded from Central America, nearly all of which are described as new; one only, and that an introduced one from Europe, has hitherto been noticed from within the limits of our fauna. The inextricable confusion existing at present amongst authors as regards the true limits of many genera, some of which have not been really characterized*, has given me considerable trouble in dealing with such a large amount of material. The form of the mandibles, which is not noticed by many authors, affords a good generic character in some cases; while the clothing of the soles of the tarsi and the toothing or not of the claws often cannot be depended upon. The false twelfth joint to the antennæ in many genera is

* Such are *Ananca*, Fairm. & Germ., and *Sessinia*, Pascoe.

characteristic of this family, it being really present in the males of some, e. g. *Nacerdes* and *Xanthochroa*. No genus is known to me from Central America, except the introduced *Nacerdes*, with a single spur to the front tibiæ. With some few exceptions, the different species are apparently confined to a limited area, those frequenting the sea-shore being rather more widely distributed. The numerous representatives from the Antilles, though closely allied in some cases, appear to be specifically different from those from the mainland of America. Many of the Central-American forms superficially resemble species of Telephoridæ. A considerable number of species frequent the sea-shore in all parts of the World.

We are much indebted to Dr. Horn for his assistance in communicating specimens of many of the North-American species of this family; and examples of all the North-American genera and very many of the species have been examined; of the latter a few are common to the Southern United States and Mexico.

The following table will perhaps assist in the identification of the Central-American genera:—

1. Eyes very deeply divided by a canthus extending halfway across them, the antennæ inserted near the end of the canthus . . . . . *Calopus*.
2. Eyes moderately or feebly emarginate or entire, the antennæ inserted at or above the inner limit of the eye . . . . . 3.
3. Penultimate joint of the tarsi very narrowly lobed beneath . . . . . *Microtonus*.
   Penultimate joint of the tarsi broadly lobed beneath . . . . . 4.
4. Anterior tibiæ with one spur; antennæ 12-jointed in the male, 11-jointed in the female . . . . . *Nacerdes*.
   Anterior tibiæ with two spurs; antennæ 11-jointed in both sexes . . . 5.
5. Body more or less stout; mandibles bifid; antennæ inserted at some distance before the eyes; eyes (in our species) small, finely granulated, and, usually, rather prominent; tibial spurs long; claws simple . . . *Ditylus*.
   Body slender and more parallel . . . . . 6.
6. Mandibles pointed or entire at the apex* . . . . . 7.
   Mandibles bifid at the apex . . . . . 9.
7. Head not or only a little prolonged in front . . . . . 8.
   Head prolonged in front into a beak; eyes oblong, depressed, and finely granulated . . . . . *Piras*.
8. Eyes very large or moderately large, transverse, finely granulated, and prominent; thorax as broad at the base as at the apex; fifth ventral segment deeply emarginate in the middle in the male; claws simple . *Diplectroides*.
   Eyes more oblique, smaller, more coarsely granulated, and not prominent; thorax longer, oblong-cordate, narrowed behind, and narrower at the base than at the apex; fifth ventral segment unemarginate in the middle in the male; claws toothed or simple . . . . . *Oxacis*.

* Sometimes with a short tooth on the inner upper side of the right mandible only.

9. Last joint of the maxillary palpi more or less widened, cultriform, subcultriform, or subtriangular; claws simple . . . . . 10.
Last joint of the maxillary palpi narrowly ovate, with the apex obliquely rounded or truncate; claws simple or toothed . . . . . 12.
10. Thorax cordate or quadrate, with more or less prominent hind angles; fifth ventral segment emarginate in the middle in the male . . . . . 11.
Thorax oblong-cordate, narrowed from the middle to the base, and with less prominent hind angles; eyes not prominent, oblique, coarsely granulated (except in *C. dugesi*); fifth ventral segment unemarginate in the middle in the male . . . . . *Copidita.*
11. Eyes transverse, prominent; thorax strongly constricted behind and with prominent hind angles; elytra with rows of double lines or vague costæ; antennæ and legs stout or moderately stout; form rather convex, moderately broad . . . . . *Diplectrus.*
Eyes more oblique, less prominent; thorax more quadrate and with less prominent hind angles; elytra with sharply raised lines; antennæ and legs slender; form narrowly elongate and more depressed . . . . . *Vasaces.*
12. Eyes more or less emarginate or sinuate within, variable in size, finely granulated; elytra with more or less distinct raised lines on the disc; claws simple; fifth ventral segment more or less emarginate in the middle in the male . . . . . *Sisenes.*
Eyes entire; elytra without raised or impressed lines on the disc; claws toothed . . . . . *Vodomarus.*

CALOPUS.

Calopus, Fabricius, Syst. Ent. p. 182 (1775); Lacordaire, Gen. Col. v. p. 702.

Three species only of this genus have been described, one from Europe and two from North America. Four are now added from Central America. The genus is remarkable from having the antennæ inserted in the canthus which extends partly across the eye. The males of the Central-American species have the antennæ subserrate and almost as slender as in *Sparedrus*, and they thus differ considerably from the type. *Calopus* much resembles some genera of Longicornia.

1. **Calopus mixtus.** (Tab. V. fig. 19, ♂.)

Very elongate, testaceous or piceo-testaceous, slightly shining, thickly clothed with ashy decumbent hairs, the entire upper surface very closely and coarsely punctured. Head rather more sparsely punctured between the eyes, the latter black and somewhat widely separated; antennæ (♂) very long and slender, reaching nearly or quite to the end of the elytra, joint 2 about one-third of the length of 3, the outer joints subserrate; prothorax about as long as broad, the sides rounded anteriorly and very gradually narrowing and almost straight behind, the hind angles subrectangular, the disc somewhat flattened and with a shallow oblique impression on each side and a transverse one before the base; elytra with numerous scattered, smooth, irregular, slightly raised spots; beneath very closely punctured; the fifth ventral segment feebly emarginate in the male.

Length $9\frac{1}{2}$–$13\frac{1}{4}$ millim. (♂.)

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

Two examples, both males. In the smallest specimen the antennæ extend fully to the end of the body, but in the other and much larger one they are considerably shorter. *C. mixtus* is closely allied to *C. aspersus*, Lec.; but differs from a Texan specimen of that species before me in the more widely separated eyes and more slender antennæ in the male, the second joint of the latter being much longer (nearly twice as long as in *C. aspersus*), the head and thorax not so closely punctured, and the elytra with more numerous raised spots. The eyes are about as widely separated as in the female of the European *C. serraticornis*.

2. **Calopus obsoletus.**

Closely allied to *C. mixtus*; the prothorax more coarsely, the elytra less closely, punctured, the latter comparatively much less elongate and without smooth raised spots; the antennæ (♂) extending to about two-thirds of the length of the elytra and subserrate; the rest as in *C. mixtus*.

Length 11–11⅔ millim. (♂.)

Hab. GUATEMALA, Volcan de Atitlan 3000 feet (*Champion*).

Two male examples. *C. obsoletus* may prove to be only a local form of *C. mixtus*, but it seems inadvisable to treat it as such, the two male specimens of each agreeing well *inter se*. *C. angustus*, Lec., is an allied species, but differs in many important particulars.

3. **Calopus rugicollis.**

Moderately elongate, comparatively convex, castaneous, slightly shining, sparsely pubescent. Head very coarsely and closely punctured, the epistoma still more coarsely so, the eyes black and rather distant; antennæ (♀) slender, reaching to the middle of the elytra, the outer joints moderately serrate; prothorax convex, not quite so long as broad, the sides rounded anteriorly and nearly straight behind, the disc with a short shallow oblique impression on each side at the base only, the surface densely punctured, the punctures very coarse but quite shallow and here and there confluent; elytra closely and coarsely punctured (the punctures much finer and deeper than those on the prothorax), without traces of raised lines or spots, the suture depressed below the scutellum and also for some distance before the apex; beneath coarsely and closely punctured.

Length 10 millim. (♀.)

Hab. GUATEMALA, El Jicaro in Vera Paz (*Champion*).

One example. This species is less elongate and more convex than the two preceding, from both of which it differs in the very shallow, crowded, and coarser punctuation of the thorax; the elytral punctuation is finer and rather more scattered than in *C. obsoletus*.

4. **Calopus depressus.** (Tab. V. fig. 20, ♂.)

Very elongate, narrow, depressed, subparallel, testaceous, slightly shining, thickly pubescent. Head coarsely and somewhat closely punctured, the eyes (♂) black and rather distant; antennæ (♂) long and slender, reaching to two-thirds of the length of the elytra, the outer joints subserrate; prothorax about as long as broad, widest a little before the apex and thence to the base very gradually narrowing, the hind angles rectangular, the disc a little flattened behind and with a shallow arcuate impression just before the base, the surface closely and rather coarsely punctured; elytra depressed, very closely, shallowly, and moderately

coarsely punctured; beneath finely and rather sparsely punctured; legs slender; fifth ventral segment feebly emarginate in the middle in the male.

Length 8 millim. (♂.)

Hab. MEXICO, near the city (*Höge*).

One male example. Narrower, more depressed, more parallel, and much less coarsely punctured than either of the preceding species, the thorax less rounded at the sides anteriorly and broader in front, the legs more slender.

MICROTONUS.

Microtonus, Leconte, Class. Col. N. Am. p. 259 (1862); Leconte & Horn, Class. Col. N. Am. pp. 404, 405 (1883).

This genus is referred by its author to the Œdemeridæ. *Microtonus* has hitherto only contained a single species from the United States; the six from Central America here included in the genus differ considerably amongst themselves, and one or two of them approach *Symphora* so closely that they might almost equally well be placed in it. The typical representatives of *Microtonus* and *Symphora* have, it is true, a different facies; but this is bridged over by the numerous additional species referred to these genera in this work. The structure of the maxillary palpi, antennæ, legs, &c. seems to be almost identical; and, apparently, the only difference of importance is the rather longer mesosternum and more widely separated middle coxæ in *Microtonus*, the middle coxæ being about equally exserted in both. The thorax in both genera is without distinct lateral suture, and it varies in shape in the different species—in typical *Microtonus* it is subquadrate, sinuate behind, and with the hind angles acute, and in *Symphora* short and subtrapezoidal; the transverse frontal suture of the head is also a variable character, it being very distinct in some species and almost or quite obsolete in others; the penultimate joint of the tarsi is feebly lobed beneath, and the basal joint of the hind pair is very long in both. *Microtonus* would probably be better placed in the Melandryidæ, after *Symphora*; but for the purposes of this work the position assigned to it by Leconte is adopted for the present. Some of the Central-American species referred to it (and to *Symphora* also) will no doubt have to be separated eventually; but with our wholly insufficient material it is inadvisable to propose new genera for these intermediate forms.

The Central-American species may be separated thus:—

Body elongate or moderately elongate.
- Eyes comparatively large, oblique; upper surface opaque, the pubescence short and fine.
  - Frontal suture distinct; elytra spotted; pubescence variegate . . *figuratus*.
  - Frontal suture indistinct; elytra unicolorous; pubescence uniform . *gracilis*.

Eyes smaller and more transverse; frontal suture indistinct; pubescence longer and coarser.
Surface opaque; elytra unimpressed . . . . . *pilosus.*
Surface shining; elytra with distinct impressions . . . . . *nitidulus.*
Body very elongate, more or less fusiform; eyes moderate in size; surface subopaque or slightly shining.
Pubescence short and fine; sides of the thorax straight behind, the hind angles rectangular . . . . . *elongatus.*
Pubescence longer and coarser; sides of the thorax converging from the base, the hind angles acute and extending outwards . . . . . *fusiformis.*

1. **Microtonus figuratus.** (Tab. V. fig. 14, ♂.)

Moderately elongate, comparatively broad, opaque; brownish-black, the head and the sides and base of the prothorax (broadly) reddish, the elytra each with a large transverse brownish-testaceous patch (angulate on its lower edge and with a branch extending upwards) below the base, not quite reaching the suture and enclosing an oblong spot, and an oblique stripe beyond the middle, this stripe confluent with the opposite one at the suture, extending along the latter towards the apex, and in front connected with the transverse patch; the entire upper surface very densely and uniformly punctured and clothed with short ashy pubescence, the elytra bare in places and with the pubescence assuming the form of stripes or spots. Head with well-defined transverse frontal suture, the eyes comparatively large, the antennæ and palpi testaceous; prothorax transverse, unimpressed, the sides converging from the base, rounded in front, and sinuate behind, the hind angles acute; elytra comparatively broad, rather short; beneath piceous, densely and somewhat coarsely punctured and pubescent; legs piceous-brown, the tarsi testaceous, the first joint of the hind tarsi longer than the following joints united.

Length $3\frac{1}{3}$ millim. (♂.)

Hab. Mexico, Jalapa (*Höge*).

One male example. This elegantly-marked little insect closely agrees with *M. sericans*, Lec., in its general structure; but differs in the thorax being less quadrate, and in the elytra being comparatively broader and spotted and with the pubescence variegate. At first sight, the pubescence appears to be abraded; but this is not the case, the arrangement being exactly similar on each elytron. The punctuation of the elytra is very dense and regular, and the minute interspaces have a somewhat granular appearance; the markings are difficult to describe and they will be best understood from our figure.

2. **Microtonus gracilis.** (Tab. V. fig. 15, ♀.)

Elongate, narrow, convex, opaque, piceous-brown, the head reddish, the entire upper surface densely and coarsely punctured, the head and prothorax rugosely so, and clothed with short silky pubescence. Head with the transverse frontal suture shallow, the epistoma short, the eyes comparatively large and more widely separated in the female than in the male, the antennæ and palpi testaceous; prothorax transverse, narrowing from the base, the sides feebly sinuate behind and rounded in front, the hind angles acute, the surface quite unimpressed; elytra less rugosely punctured than the head and prothorax and not so dull; beneath piceous, densely and coarsely punctured and pubescent; legs very slender, testaceous, the femora a little darker, the first joint of the hind tarsi much longer than the following joints united; sixth ventral segment in the male furnished on each side with a long spatulate appendage.

Length $2\frac{1}{2}$–$2\frac{3}{4}$ millim. (♂ ♀.)

Hab. Guatemala, San Gerónimo 3000 feet (*Champion*).

Two specimens. This species is allied to *M. sericans*, Lec., from which it differs in its narrower shape, much more coarsely punctured surface, shallow frontal groove, and unimpressed and differently-shaped thorax.

3. **Microtonus pilosus.**

Elongate, rather narrow, convex, subopaque, dull brown, the head reddish, the entire upper surface densely and somewhat roughly punctured and clothed with rather long appressed ashy pubescence. Head with the transverse frontal suture shallow, the apical joint of the maxillary palpi piceous; eyes small, very widely separated, black; antennæ piceo-testaceous, joints 2 and 3 testaceous; prothorax transverse, unimpressed, very little narrowed anteriorly, the sides rounded in front and sinuate behind, the hind angles acute; elytra comparatively elongate; beneath piceous, densely and coarsely punctured and pubescent; legs testaceous, the femora and the apices of the tibiæ piceous, the first joint of the hind tarsi very little longer than the following joints united.

Length $3\frac{1}{3}$ millim.

Hab. GUATEMALA, Quiche Mountains 8000 feet (*Champion*).

One specimen, apparently a female. This species differs from *M. gracilis* and *M. sericans* in its very much smaller, more transverse, and more widely separated eyes, and much longer pubescence; the thorax is less narrowed in front than in *M. gracilis* (thus resembling *M. sericans*), and the first joint of the hind tarsi is shorter.

4. **Microtonus nitidulus.** (Tab. V. fig. 16.)

Elongate, shining, piceous or brownish-piceous, the entire upper surface thickly and rather coarsely punctured and sparsely clothed with long appressed ashy pubescence. Head without distinct transverse frontal suture, the eyes small and very widely separated in both sexes, the palpi and antennæ piceous; prothorax transverse, narrowed in front, the sides rounded anteriorly and strongly sinuate behind, the hind angles acute, the surface not so closely punctured as that of the head, an ill-defined longitudinal space on the middle of the disc impunctate; elytra very long, each with a large shallow oblique impression below the base and a much shallower oblong one near the suture about the middle (the latter sometimes indistinct), the punctures more scattered than on the prothorax and becoming a little finer and shallower towards the apex; beneath closely punctured and pubescent; legs very long, piceous, the basal two-thirds of the tibiæ and the first joint of the hind tarsi more or less testaceous, the latter as long as the following joints united.

Length $3\frac{3}{4}$–$5\frac{1}{3}$ millim. (♂ ♀.)

Hab. GUATEMALA, Totonicapam 9000 to 10,000 feet (*Champion*).

Four examples. This insect differs from the type of the genus, *M. sericans*, in the smaller and more transverse eyes, impressed elytra, shining and more sparsely punctured surface, coarser pubescence, longer legs, and almost obsolete frontal suture. *M. pilosus* is, however, intermediate between the two.

5. **Microtonus elongatus.** (Tab. V. fig. 17, ♂.)

Very elongate, narrow, subfusiform, subopaque; varying in colour from testaceous with the head and prothorax reddish and the elytral suture a little darker, to piceous with a testaceous stripe on each elytron extending from the shoulder to the apex; the entire upper surface densely and coarsely (the head and prothorax rugosely) punctured, and clothed with fine, short, appressed pubescence. Head without distinct transverse frontal suture, the eyes moderately large, smaller and more distant in the female, the antennæ varying in colour from piceo-testaceous to testaceous; prothorax convex, almost as long as broad, the sides nearly

straight behind and converging in front, the hind angles subrectangular, the surface unimpressed; elytra very elongate, the punctures separate one from another, and not confluent as on the head and prothorax; beneath piceo-testaceous or piceous-brown, closely and coarsely punctured and pubescent; legs very long, more or less testaceous, with the femora and the apices of the tibiæ stained with piceous, the first joint of the hind tarsi rather longer than the following joints united.

Length $3\frac{1}{3}$–$4\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Real del Monte in Hidalgo (*Höge*).

Five specimens. Larger and very much more elongate than *M. sericans* and *M. gracilis*. The general outline more fusiform, the thorax longer, the frontal suture obliterated. Our two male examples exhibit the above-described dark coloration, the three females being of a much lighter tint; the males are considerably narrower than the females.

6. **Microtonus fusiformis.** (Tab. V. fig. 18.)

Very elongate, fusiform, convex, slightly shining; the head and prothorax reddish-testaceous, the latter much suffused with piceous; the elytra testaceous, with a large triangular scutellar patch, the suture narrowly, but with a common oblong patch beyond the middle and another at the apex, and an oblong lateral patch about the middle (extending narrowly upwards and downwards along the margin), piceous; the entire upper surface densely and coarsely (the head and prothorax rugosely) punctured, and clothed with long appressed pubescence. Head without distinct transverse frontal suture; eyes moderately large, not very convex, black; antennæ and palpi testaceous; prothorax convex, not so long as broad, the sides rapidly and obliquely converging from the base, the hind angles very acute and extending outwards as far as the base of the elytra, the surface unimpressed; elytra very elongate, more shining than the prothorax, the punctures moderately close; beneath piceous, the venter and metasternum in great part reddish-testaceous, closely and coarsely punctured and pubescent; legs very long, testaceous, the basal joint of the hind tarsi much longer than the following joints united.

Length 5 millim.

Hab. Guatemala, Calderas 6000 feet (*Champion*).

At first sight, *M. fusiformis* appears to be only a colour-variety of *M. elongatus*; it is, however, more convex, broader, and more fusiform; the thorax is differently-shaped, the hind angles being very acute and extending outwards as far as the shoulders of the elytra, and the sides rapidly converging from the base; the punctuation of the elytra is more diffuse; the first joint of the hind tarsi is more elongate; and the pubescence is much longer and coarser. The two examples obtained agree precisely in colour; they are apparently both of the male sex.

NACERDES.

Nacerdes, Schmidt, Linn. Entom. i. p. 28 (1846); Lacordaire, Gen. Col. v. p. 705 *.
Ischnomera, Stephens, Ill. Brit. Ent. v. p. 53 (1832) (pars).

This genus contains a large number of species, mostly from Europe or North Africa, those referred to it from other countries being in all probability not really congeneric.

* For full synonymy see Lacordaire (*op. cit.*) &c.

Nacerdes, like *Xanthochroa*, has twelve-jointed antennæ in the male, a single spur to the anterior tibiæ, and bifid mandibles. We have only to notice a single species from our region, and this an introduced one from Europe, which seems to be rapidly extending to various parts of North and Central America. This species, *N. melanura* (Linn.), though a common insect on the sea-shore, where it breeds in old posts &c., is frequently found inland; it has no doubt been transmitted in timber.

1. Nacerdes melanura.

Cantharis melanura, Linn. Faun. Suec. p. 205; Hamilton, Cat. of Col. common to N. America, Northern Asia, and Europe, in Trans. Am. Ent. Soc. xvi. pp. 152, 153 (1889)[1].

Œdemera apicalis, Say, Bost. Journ. Nat. Hist. i. p. 188[2]; Complete Writings, ii. p. 660.

Hab. North America, Nova Scotia[1], Pennsylvania[2], Ohio[1], Kansas[1], Louisiana[2], California[1]. — Mexico, Yucatan (*Horn*[1]); Costa Rica (*Van Patten*). — Europe; Northern Asia.

DITYLUS.

Ditylus, Fischer, Mém. Soc. Imp. Nat. Mosc. v. p. 469 (1817); Lacordaire, Gen. Col. v. p. 703; Leconte & Horn, Class. Col. N. Am. p. 404 (1883).

Mimetes, Eschscholtz, Mém. Ac. Petr. vi. p. 468 (1818).

Species of this genus have been described from Europe, East Africa, Madagascar, North America, and the Canary, Salvages, and Cape Verd Islands. Six are here enumerated from Central America, one from Mexico and five from the Los Altos region of Guatemala; several of these differ widely from the known species of the genus in the enormously enlarged head in fully-developed males, this development being also present to a less degree in the female. Every degree of development is present in the Central-American species, from that of the European *D. lævis* (Fabr.), in which the head is not at all dilated behind the eyes, to one in which the head in the male is almost as large in proportion as it is in the same sex of the genus *Horia*. In the lowest development of the female of *D. mexicanus* the head is formed as in *D. lævis* and various North-American forms; in most of our examples of the various species, however, not only of the male but of the female also, the head is more or less dilated at the sides behind the eyes, and in this respect the Central-American representatives of the genus apparently differ from all others yet described.

In these latter the antennæ are stout in both sexes, and about reach the middle of the elytra (in the females of *D. brachinoides* and *D. cephalotes* they are shorter); the eyes are small and distant from the point of insertion of the antennæ, finely granulated, rather transverse, and usually prominent; the mandibles are bifid; the joints 1–4 or 2–4 of the front tarsi, 1–4, 2–4, or 3 and 4 of the middle tarsi, and 3 of the hind tarsi are spongy-pubescent beneath; the tibial spurs are long; and the claws are simple. The three insular species described by Wollaston have larger, more depressed, and

much more coarsely granulated eyes; and they will probably have to be separated from *Ditylus*.

* *Head largely developed in both sexes, in some species enormously large in the male.*

1. **Ditylus brachinoides.** (Tab. V. fig. 21, ♂.)

Elongate, rather convex, finely pubescent, varying in colour from brownish-ochraceous to ferruginous, the head usually with a piceous patch in the middle below the eyes, the elytra often darker, and sometimes of a blackish-brown tint, the prothorax shining, the head subopaque, the elytra very opaque. Head densely and very finely punctured, with a smooth raised line on the vertex behind—in small males and in the female moderately dilated behind the eyes, and as wide as the prothorax, in fully-developed males enormously large, much wider than the prothorax, with the sides largely and obliquely dilated behind the eyes, and extending laterally far beyond them, and abruptly constricted behind, and the mandibles also greatly elongated,—the eyes black, quite small, and not prominent; antennæ varying in colour from testaceous to fusco-ferruginous; prothorax about as long as broad, the sides much rounded anteriorly and strongly constricted behind, the hind angles acute, very broadly transversely depressed in front, and deeply impressed in the middle before the base, the disc usually with a shallow depression on each side about the middle, the surface very minutely, closely, and irregularly punctured (more sparsely so than that of the head), a very narrow longitudinal space down the centre, raised in the middle or in front, and deeply impressed behind, impunctate, the apex emarginate in the middle in fully-developed males; elytra moderately long, a little convex, rather narrow at the base and widening to far beyond the middle, somewhat obtuse behind, very finely, closely, and shallowly punctured, with two rather broad vague costæ down the middle of the disc and one near the sides, extending from the base nearly to the apex, the suture also a little raised; beneath rather dull, finely and densely punctured and pubescent, reddish-ochraceous or ferruginous, sometimes stained with piceous; legs more or less ochraceous or ferruginous, very stout in fully-developed males; fifth ventral segment arcuate-emarginate in the middle in both sexes.

Length 8½–15 millim. (♂ ♀.)

Hab. Mexico, Jacale, Orizaba (*Sallé*).

Numerous examples. This fine species is labelled *D. brachynoides*, Chevr., in the Sallé collection. The head in fully-developed males is enormously enlarged; males of minor development and females approach *D. mexicanus* &c. in this respect. The species is exceedingly variable in size and colour, and also in the degree of development of the head in the male. Examples of it from Mexico are also contained in the National and other collections. *D. brachinoides*, as its name suggests, has much the facies of a *Brachinus*.

A fully-developed male is figured.

2. **Ditylus longicollis.** (Tab. V. fig. 22, ♂.)

Moderately elongate, rather convex, finely pubescent, above and beneath and the legs and antennæ unicolorous brownish-ochraceous, the head and prothorax slightly shining, the elytra opaque. Head closely and minutely punctured, dilated behind the eyes, as wide as the prothorax—in well-developed males broader than the prothorax and much larger,—the eyes black, quite small, and not prominent; prothorax longer than broad, convex, the sides rounded in front and moderately constricted behind, the hind angles acute, the disc deeply impressed in the middle before the base, and with one or two vague impressions on each side anteriorly, the surface rather more finely and sparsely punctured than that of the head, a narrow longitudinal space down the middle of the disc impunctate; elytra comparatively short, rather convex, widest about the middle, very shallowly, minutely, and closely punctured, and with one or two very vague costæ on the

middle of the disc (distinct only towards the base), and (in one example) with a more distinct one near the side extending from the shoulder to beyond the middle, the suture also a little raised; beneath finely and densely punctured and pubescent; fifth ventral segment broadly and shallowly arcuate-emarginate.
Length 7–8½ millim. (♂.)

Hab. GUATEMALA, Tepan 6000 feet (*Conradt*).

Two male examples. Closely allied to *D. brachinoides*, and differing as follows:—The head more sparsely and finely punctured, not so dull, and without a smooth raised line on the vertex; the thorax longer and more convex, the surface more even and without distinct transverse depression in front; the elytra shorter, widest about the middle, and with the vague costæ on the disc almost obsolete.

3. **Ditylus cephalotes.** (Tab. V. fig. 23, ♀.)

Elongate, rather convex, finely pubescent; varying in colour from dark piceous-brown to ferruginous with the prothorax testaceous, the latter in dark examples often more or less reddish or fulvous at the sides anteriorly, and the shoulders also lighter in colour; the head slightly shining, the prothorax shining, the elytra opaque. Head densely and finely punctured, and with a narrow smooth longitudinal space (slightly impressed in some examples) on the middle of the vertex, dilated at the sides behind the eyes, and largely developed in both sexes, broader than the prothorax in the male, the eyes convex and prominent, the antennæ stout; prothorax longer than broad in the male, broader and rather shorter in the female, convex, the sides very much rounded anteriorly and strongly constricted behind, the hind angles moderately prominent, the disc transversely depressed before the middle and also before the base, and with an oblique impression on each side in front, the surface very closely and finely punctured, a smooth narrow longitudinal space on the middle of the disc impunctate, this space more or less impressed towards the base, the base finely margined (the margin not raised); elytra coriaceous, moderately long, widest beyond the middle, very closely and minutely punctured, with two very vague costæ on the middle of the disc, these only distinct towards the base, and obsolete beyond, the suture also a little raised towards the base; beneath and the legs coloured like the rest of the body, the former finely and densely punctured and pubescent; fifth ventral segment unemarginate in the middle in both sexes.
Length 8½–11 millim. (♂ ♀.)

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Eleven examples, found beneath loose pine-bark. To judge from this series there is very little sexual disparity in the development of the head in *D. cephalotes*; in the male the thorax is rather narrower and longer than it is in the female, and the head, in consequence, appears to be broader. More elongate than *D. longicollis*; the eyes much more prominent and a little larger; the head more densely punctured; the thorax more strongly rounded at the sides anteriorly, and more constricted behind. The more evenly convex thorax, prominent eyes, &c., distinguish it from *D. brachinoides* in all its varieties.

4. **Ditylus tepanensis.**

Elongate, rather convex, finely pubescent, piceous-brown; the head opaque, castaneous at the sides and in front, the epistoma and mandibles testaceous, the latter with the tips black; the prothorax shining, and with a reddish vitta on each side and an oblong spot on the middle of the disc behind; the elytra slightly shining. Head finely and not closely punctured (the punctures closer at the base and more distant in front), with a smooth impressed line on the middle of the vertex, moderately dilated at

the sides behind the eyes, and largely developed, as wide as the prothorax, the eyes quite small and not prominent, the antennæ ferruginous and stout; prothorax longer than broad, convex, the sides much rounded in front and moderately constricted behind, the hind angles very prominent, the base strongly margined, the disc transversely depressed before the middle and also before the base, the surface irregularly and rather sparsely punctured, a smooth, narrow, longitudinal space on the middle of the disc impunctate, this space deeply impressed towards the base; elytra coriaceous, long, widest beyond the middle, depressed on each side at the base in the centre, closely, shallowly, and finely punctured, with three vague costæ and several very irregular shallow longitudinal grooves extending from the base nearly to the apex, the suture also a little raised; beneath finely and closely punctured and pubescent; legs fusco-ferruginous; fifth ventral segment unemarginate.

Length $14\frac{1}{2}$ millim. (♀.)

Hab. GUATEMALA, Tepan 6000 feet (*Conradt*).

One example. Larger and broader than the largest examples of the corresponding sex of *D. cephalotes*; the head and thorax much less closely punctured, the latter with the base more strongly margined and the hind angles more extended; the eyes not so prominent; the elytra more shining, more strongly (though very shallowly) punctured, and with shallow longitudinal grooves and vague costæ extending from the base nearly to the apex.

** *Head largely developed in the male (at least in* D. mexicanus), *normal in the lowest development of the female.*

5. **Ditylus mexicanus.** (Tab. V. fig. 24, ♂.)

Elongate, depressed, finely pubescent, blackish-violaceous; the head and prothorax violaceous or bluish, and slightly shining, the latter with a red spot on each side in front, or with the sides rather broadly, and the disc also red; the elytra very opaque. Head as wide as the prothorax, a little dilated on each side behind the eyes—in well-developed males longer and broader, with the sides behind the eyes more extended (reaching outwardly as far as the eye itself), and more abruptly narrowed behind,—very finely and densely punctured, the eyes small, the antennæ black; prothorax about as long as broad, the sides strongly rounded anteriorly and much constricted behind, the hind angles acute, the disc with a deep (or shallow) transverse depression in the middle before the base, a shallow one in front, and two more or less distinct rounded depressions on each side (one before, the other behind the middle), the surface densely, finely, and irregularly punctured, the punctures in the depressions obliquely confluent, an irregular, narrow, longitudinal, slightly raised space on the middle of the disc impunctate; elytra moderately long, subparallel in their basal half, broadly flattened on the disc, very minutely and densely punctured, the punctures connected by oblique scratches, with one or two vague costæ down the middle of the disc, and one near the side (the latter extending from below the shoulder to the apex, and limiting the flattened portion laterally), the suture also a little raised; beneath finely and densely punctured and pubescent, violaceous, the prothorax and venter sometimes reddish; legs black; fifth ventral segment arcuate-emarginate in the middle in the male, rounded in the female.

Length $7\frac{1}{3}$–$10\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO (*Sallé*), near the city (*Höge*).

Five examples, two males and three females. This species is distinguished by its depressed form from all others of the genus yet described. The elytra, when viewed under a strong lens, are obliquely strigose. *D. mexicanus* is apparently allied to *D. bicolor* and *D. cyanipennis*, Horn.

6. **Ditylus basalis.** (Tab. V. fig. 25, ♀.)

Elongate, rather narrow, somewhat thickly pubescent; the head and prothorax shining, the elytra opaque, the head black, the prothorax flavous with the base broadly black, the elytra dark violaceous. Head densely and finely punctured, as broad as the prothorax, dilated on each side behind the eyes, and abruptly constricted behind, the eyes prominent, the antennæ black; prothorax broader than long, strongly rounded at the sides anteriorly and much constricted behind, the disc with an arcuate impression in the middle before the base and vaguely impressed on each side before the middle, the base impressed on each side towards the acute hind angles, the surface very minutely and densely punctured, a narrow ill-defined longitudinal space on the middle of the disc smooth; elytra moderately long, feebly convex, rather narrow at the base, widest beyond the middle, thickly and very minutely punctured, the punctures separate one from another, the disc without distinct costæ, a longitudinal ridge at the sides extending from below the shoulder nearly to the apex, the suture also a little raised; beneath, the head and prothorax excepted, piceous-brown, finely and densely punctured and pubescent; legs piceous; fifth ventral segment truncate.

Length $8\frac{3}{4}$ millim. (♀.)

Hab. GUATEMALA, Tepan 6000 feet (*Conradt*).

One female example. Narrower, less parallel, and more convex than *D. mexicanus*; the eyes more prominent; the thorax shorter, more minutely punctured, more shining, and differently coloured; the elytra with exceedingly minute punctures, the punctures not connected by oblique strigæ.

DIPLECTRUS.

Diplectrus, Kirsch, Berl. ent. Zeitschr. xxx. p. 210 (1866).

This genus was proposed by Kirsch for a single species, *D. ferrugineus*, from Colombia, of which he had, apparently, only the female before him. Several other species from Central America are here referred to it, and *Œdemera* (*Nacerdes*) *marginata*, Guér., from Colombia, and various undescribed forms from Tropical South America are, no doubt, congeneric with them. Our species are of large size and elongate-parallel shape, and they agree in the following particulars:—Antennæ 11-jointed in both sexes; apical joint of the maxillary palpi elongate-triangular or cultriform, with the apex very obliquely rounded or truncate, that of the labial palpi more or less securiform; mandibles bifid*; eyes rather finely granulated, feebly emarginate, moderately large, transverse when viewed from above; prothorax as long as or longer than broad, rounded at the sides in front, constricted behind, and with prominent hind angles; elytra very long, more or less parallel; anterior tibiæ with two spurs; tarsi with all the joints, except the apical one, densely tomentose beneath; claws feebly dilated at the base. Male with the fifth ventral segment more or less emarginate in the middle; the sixth segment visible through the emargination of the fifth, or extending a little beyond it, divided down the middle, and with the dorsal and ventral portions about equally developed; the sheath of the œdeagus with an accompanying, separate, spoon-shaped piece (the lateral lobe of an additional segment†) on each side. Female with the fifth ventral segment feebly emarginate or rounded.

* The form of the mandibles is not stated by Kirsch.

† In the Cistelidæ the corresponding spoon-shaped piece forms part of the sixth ventral segment; in *Diplectrus* it is part of an additional, or seventh, segment.

In the males of some of the Central-American species the anterior, or the anterior and intermediate, tibiæ are furnished with a smooth triangular projection at their inner apical angles, and the intermediate or the four hinder tibiæ are dilated within; in one of these species all the femora are also much thickened.

* *Upper surface entirely opaque.*

1. *Femora thickened, the anterior tibiæ with a smooth angular projection at their inner apical angle, and the four hinder tibiæ dilated towards the apex, in the male.*

1. **Diplectrus nigripes.** (Tab. VI. figg. 1, ♂; 1 *a*, œdeagus.)

Elongate, parallel, opaque, densely and finely pubescent, yellowish-ochraceous; the head and legs black or piceous; the prothorax sometimes of an orange tint, and in rare individuals stained with piceous on each side (in one example the piceous colour is much extended, and the base, apex, and a line down the middle alone remain of the ground-colour); the elytra with the extreme base and the apical half or less black (sometimes with the black portion less extended, and in the form of a very large oblong patch), or entirely yellowish-ochraceous. Head densely and finely punctured, the eyes prominent and rather large; antennæ black or piceous, sometimes with the outer joints ferruginous (joints 3–5 pale at the base in one example), very long and slender, tapering outwardly, joint 2 one-third of the length of 3, 3 longer than 4; prothorax convex, about as long as or rather longer than broad, strongly rounded at the sides in front and much narrowed behind, the base with distinct margin, the hind angles prominent, the disc feebly transversely depressed in the middle before the base, the surface punctured like that of the head; elytra long and parallel, about one and a half times the width of the prothorax, a little flattened on the disc, finely and densely punctured, sometimes with traces of one or two very faint costæ on the disc, the apices separately rounded; beneath very densely punctured, thickly clothed with long ashy pubescence, more or less piceous, the prothorax and venter ochraceous; legs densely punctured and pubescent, the four hinder tibiæ a little curved.

♂. Femora very stout; anterior tibiæ slightly constricted on the inner side immediately before the apex, and smooth and shining at this part, the inner angles strongly and triangularly produced; intermediate tibiæ dilated within on the inner side towards the apex; hind tibiæ sinuously curved and strongly and abruptly dilated within towards the apex; fifth ventral segment slightly emarginate in the centre; sixth ventral segment divided down the middle; the central sheath with an accompanying, separate, spoon-shaped piece on each side, the latter fringed with long hairs at the apex.

Length 14½–18½ millim. (♂ ♀.)

Hab. Nicaragua (*Sallé*), Chontales (*Belt*, *Janson*).

This remarkable insect is not uncommon at Chontales, and is contained in many collections. The amount of black on the apical portion of the elytra varies very much in the numerous examples before me, and in about one-third of them it is altogether obsolete; the head and legs, however, and the antennæ in great part, are constantly black or piceous. The male may be readily distinguished from the allied forms by the thickened femora, dilated hinder tibiæ, and peculiar form of the inner apical angles of the anterior tibiæ. *D. nigripes* has very much the facies of certain Central-American species of the Malacoderm-genus *Chauliognathus*.

2. *Femora slender, the anterior and intermediate tibiæ with a smooth, sharp, angular projection at their inner apical angle, and the latter dilated towards the apex, in the male.*

2. **Diplectrus armatus.**

Very elongate, parallel, densely and finely pubescent, opaque, yellowish-testaceous, the head and prothorax of a more rufous tint. Head very closely and finely punctured, the tips of the mandibles and the eyes black, the latter large (antennæ missing); prothorax rather longer than broad, not very convex, the sides moderately rounded in front and converging behind, the hind angles prominent, the disc somewhat flattened, obsoletely longitudinally depressed on each side, and with a transverse deeper depression in the middle before the base, the surface punctured like that of the head; elytra very long, parallel, one and a half times the width of the prothorax, minutely and densely punctured, and with two vague costæ on the disc and one close to the lateral margin (the inner one extending to about the middle and the others nearly to the apex), the suture also a little raised, the apices separately rounded; beneath coloured as above, very densely punctured, and finely pubescent; legs very long, testaceous, the tibiæ and tarsi and the apices of the femora piceous.

♂. Anterior tibiæ armed at the inner apical angle with a smooth, sharp, triangular projection; intermediate tibiæ a little curved, widened within from the middle, and becoming still broader outwardly, the inner apical angle produced into a smooth, short, triangular projection; posterior tibiæ simple; fifth ventral segment very deeply and rather narrowly emarginate in the middle (the emargination extending nearly halfway across it); sixth ventral segment divided down the middle, and only visible through the emargination of the fifth; the central sheath with an accompanying, separate, largely-developed spoon-shaped piece on each side.

Length 19 millim. (♂.)

Hab. Nicaragua, Chontales (*Belt*).

One male example. Much more elongate than *D. nigripes*, the elytra narrower and proportionately very much longer; the eyes large; the thorax less convex, not so strongly rounded at the sides in front; the elytra with more distinct costæ; the pubescence of the under surface shorter and finer. The male characters are totally different:—In the present species the femora are not thickened; the intermediate as well as the front tibiæ have a sharp projection at the apex; the intermediate tibiæ are very much dilated towards the apex, the posterior pair being normal; and the fifth ventral segment has a large and deep emargination.

The femora are not stouter than in the female of *D. nigripes*.

3. *Femora slender, the tibiæ without angular projection at their inner apical angle, and not dilated (at least in* D. annulicornis), *in the male.*

3. **Diplectrus annulicornis.** (Tab. VI. fig. 2, ♂.)

Elongate, subparallel, densely and finely pubescent, opaque, unicolorous, brownish-yellow or brownish-ochraceous. Head closely and not very finely punctured, with traces of a smooth central line, the eyes black or piceous and moderately large, the maxillary palpi and the tips of the mandibles much stained with piceous; antennæ black or piceous, the base of each joint flavous or testaceous, moderately long, tapering outwardly, joint 2 not half the length of 3, 3 a little longer than 4; prothorax rather longer than broad, narrow, the sides rounded anteriorly and converging behind, the base and apex rather strongly margined, the hind angles prominent, the disc a little flattened, shallowly transversely depressed in front and more deeply so behind, and with traces of a smooth median line or ridge, the surface densely and finely punctured, the punctuation becoming rugulose in places; elytra long, nearly twice the width of the

prothorax, densely and minutely punctured, with two vague costæ on the disc and one close to the lateral margin (the inner one extending to about the middle, and the others nearly to the apex), the suture also a little raised, the apices separately rounded; beneath pubescent, coloured as above, very densely punctured; legs moderately long, testaceous, the tibiæ and tarsi and the apices of the femora piceous, the extreme base of each tarsal joint testaceous.

♂. Fifth ventral segment broadly and very deeply emarginate (shallowly arcuate-emarginate in the female); the sixth ventral segment divided down the middle; the central sheath with a separate, small, accompanying spoon-shaped piece on each side.

Length 13½–16 millim. (♂ ♀.)

Hab. Mexico (*Flohr*), Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Cerro Zunil (*Champion*); Costa Rica, Volcan de Irazu, Rio Sucio (*Rogers*).

Many specimens. Smaller and less elongate than *D. giganteus*; the elytra much shorter in proportion, narrower, and with the apices separately rounded; the antennæ differently coloured, and with less elongate joints, 3–5 being much shorter; the thorax shorter, less compressed at the sides, and more finely punctured; the legs less elongate; the fifth ventral segment emarginate in the middle in both sexes. In the male of *D. annulicornis* the head is a little broader than in the female; and the fifth ventral segment is as deeply emarginate as in *D. armatus*, but still more broadly so. A male specimen from Cerro Zunil is figured.

According to Mr. Flohr, *D. annulicornis* is not uncommon in the temperate and colder regions of Mexico.

4. **Diplectrus giganteus.** (Tab. VI. fig. 3, ♀.)

Very elongate, subparallel, opaque, ochraceo-ferruginous, the head and prothorax of a more rufous tint, densely clothed with fine fulvous pubescence. Head closely and finely punctured, obsoletely canaliculate in the middle, the eyes black and rather large, the maxillary palpi and tips of the mandibles piceous; antennæ (♀) very long and slender, the joints from the third very elongate, fusco-ferruginous, the four basal joints piceous, joint 2 about one-third of the length of 3, 3 much longer than 4; prothorax narrow, longer than broad, compressed at the sides behind the middle, the latter moderately rounded in front and strongly constricted behind, the hind angles prominent, the base and apex somewhat rounded and rather strongly margined, the disc with a large shallow triangular depression in the middle in front and a transverse one before the base and with traces of a smooth raised median ridge, the surface densely and very finely punctured, the punctuation becoming scabrous in places; elytra very long, broad, fully twice as wide as the prothorax, very minutely and densely punctured, with two vague costæ on the disc and one close to the lateral margin (the inner one extending to about the middle and the others nearly to the apex), the suture also a little rounded, the apices together rounded; beneath pubescent, testaceous, very densely punctured, the metasternum smoother in the middle; legs very long, testaceous, the tibiæ and tarsi and the apices of the femora piceous; fifth ventral segment (♀) broadly rounded.

Length 23½ millim. (♀.)

Hab. Costa Rica, Rio Sucio (*Rogers*).

One female example. Larger than *D. armatus*; the thorax compressed at the sides, longer, depressed in front, and more densely and more finely punctured, the punctuation becoming scabrous in places; the elytra relatively broader, with the apices rounded together (not separately and with the sutural angle rounded as in *D. armatus*), and of a browner tint.

5. **Diplectrus concolor.**

Very elongate, parallel, opaque, above and beneath and the legs and palpi yellowish-brown, densely clothed with fine yellowish pubescence. Head densely and finely punctured, the eyes black and moderately large, the tips of the mandibles piceous; antennæ (♀) very long and slender, extending to beyond the middle of the elytra, the joints very elongate, joint 2 about half the length of 3, 3 longer than 4; prothorax rather longer than broad, strongly rounded at the sides in front and much constricted behind, the hind angles prominent, the base and apex rather strongly margined, the disc a little flattened, very shallowly transversely depressed in front and also before the base, the surface very densely and finely punctured; elytra very long, nearly twice as wide as the prothorax, very densely and finely punctured, with two vague costæ on the disc and one close to the lateral margin (the inner one extending to about the middle and the others nearly to the apex), the suture also a little raised, the apices separately rounded; beneath very densely punctured, pubescent; legs very long; fifth ventral segment (♀) shallowly emarginate.
Length 20 millim. (♀.)

Hab. Panama, Volcan de Chiriqui 4000 feet (*Champion*).

One specimen. Closely allied to *D. giganteus* and differing thus:—The head more densely punctured; the thorax shorter, more rounded at the sides in front, flatter on the disc, and less compressed at the sides; the elytra rather narrower, and with the apices separately rounded; the fifth ventral segment (♀) shallowly emarginate in the middle; the legs, antennæ, and palpi entirely testaceous; the upper surface of a more luteous tint.

** *Head and prothorax shining, the elytra opaque; femora and tibiæ slender in the male.*

6. **Diplectrus nitidicollis.** (Tab. VI. figg. 4, ♂; 4 *a*, labium; 4 *b*, maxilla and maxillary palpus; 4 *c*, œdeagus.)

Elongate, parallel, finely pubescent, the head and prothorax shining, the elytra opaque, above and beneath and the legs and palpi ferruginous. Head closely and moderately finely punctured, with traces of a shallow transverse depression between the eyes, the latter (♂) black, convex, prominent, rather small, and widely separated, the tips of the mandibles piceous; antennæ moderately long, comparatively stout, joint 2 more than half the length of 3, 3 and 4 equal; prothorax about as long as broad, moderately convex, the base and apex slightly emarginate in the middle, the former with prominent margin, the sides strongly rounded in front and converging behind, the hind angles prominent, the disc on each side transversely depressed just before the apex, irregularly and obliquely depressed about the middle, and canaliculate in the centre at the base (in one example canaliculate to the apex, in the other with a smooth central ridge in front), the surface finely and closely punctured, the anterior portion of the disc with an irregular smooth space in the middle; elytra long, about one and a half times as broad as the prothorax, very closely and finely punctured, with three rather broad vague costæ on the disc and one close to the lateral margin (the first and third extending to about two-thirds of the elytral length and not raised, the others nearly reaching the apex), the suture also a little raised, the apices separately rounded; beneath pubescent, densely punctured; legs moderately long, the hind tibiæ (♂) feebly sinuate; fifth ventral segment (♂) broadly and deeply emarginate, the sixth divided down the middle, the central sheath with an accompanying, separate, small spoon-shaped piece on each side.
Length 16–19 millim. (♂.)

Hab. Costa Rica, Rio Sucio (*Rogers*).

Two male examples. This species agrees very nearly with the description of

D. ferrugineus, Kirsch, from Bogota; it differs, however, in its entirely ferruginous legs and antennæ and other particulars. The shorter and stouter antennæ, shining thorax, less elongate elytra, and smaller and more convex eyes distinguish it from *D. concolor*.

DIPLECTROIDES.

Mandibles narrowing to the apex, the apex not cleft; last joint of the maxillary palpi long, elongate-triangular, the apical side only about half the length of the inner side, the apex obliquely rounded off, that of the labial palpi of somewhat similar shape; eyes finely granulated, convex, very large, still larger and more approximate in the male (smaller and more distant in *D. flavicollis*, ♀), feebly emarginate; antennæ 11-jointed in both sexes, exceedingly elongate in the male, reaching nearly to the apex of the elytra, shorter in the female, joint 2 very short, one-third or one-fourth the length of 3, 3 and 4 subequal, 11 slightly constricted beyond the middle (giving the appearance of a twelfth joint); prothorax much as in *Diplectrus* (shorter in *D. flavicollis*, ♀); elytra very elongate, broadest at the base, the sides rectilinear or nearly so and gradually converging to the apex, the disc with very vague costæ or rows of double lines; legs very long; anterior tibiæ with two spurs; tarsi with all the joints except the apical one clothed with a dense brush of short hairs beneath; claws feebly dilated at the base; the rest as in *Diplectrus*. Male with the fifth ventral segment deeply triangularly emarginate; the ventral portion of the sixth segment very largely developed, furnished with two very large, long, spoon-shaped pieces (placed one above the other in repose, resembling two additional segments) which extend far beyond the fifth segment, the dorsal portion of the sixth short and without lateral appendages.

A single species from Mexico and Guatemala is referred to this genus, and a second, from Mexico, of which female examples only have been received as yet, is also provisionally included in it. Both are of large size and resemble the larger species of the Malacoderm-genus *Chauliognathus* inhabiting the same region. The above characters are chiefly taken from *D. longicornis*. In the male of this latter the antennæ are exceedingly elongate; the eyes are very large and separated by quite a narrow space above; the ventral portion of the sixth segment is very largely developed (the dorsal portion being quite short), and the two, long, broad, spoon-shaped pieces with which it is furnished lie one above the other in repose and extend far beyond the deeply emarginate fifth segment (in *Diplectrus* the sixth segment is often only visible through the emargination of the fifth, and though divided down the middle it lies quite flat in repose), the sheath of the œdeagus being, apparently, unaccompanied by an additional, separate, spoon-shaped piece on each side. In both sexes of *D. longicornis* the elytra (when closed along the suture) are distinctly broadest at the base, and very gradually and rectilinearly narrowed to the apex.

1. **Diplectroides longicornis.** (Tab. VI. figg. 5, ♂; 5 *a*, labium; 5 *b*, maxilla and maxillary palpus; 5 *c*, œdeagus.)

Very elongate, yellowish-brown, with the prothorax, the head in front, and the scutellum of a more flavous or orange tint, and the head between and behind the eyes and the base of the elytra faintly suffused with violaceous or bluish-violaceous; the head in some examples entirely of the latter colour; the elytra sometimes with the apex as well as the base very distinctly marked with violaceous or bluish-violaceous, and the rest of the surface often faintly suffused with violaceous or purplish, in one example entirely violaceous with the base and extreme apex bluish; the upper surface very densely clothed with short ashy pubescence, and

opaque, the head and prothorax not so dull. Head (including the eyes) about as wide as the prothorax in the female, broader in the male, densely and rather coarsely punctured, longitudinally depressed between the eyes; the latter black, exceedingly large and narrowly separated in the male, smaller and more distant in the female; antennæ very long in both sexes, still longer in the male, black or blackish-brown; prothorax about as long as broad, the sides moderately rounded in front and converging behind, the base and apex somewhat strongly margined, the former indistinctly emarginate in the middle, the hind angles prominent, the disc with a large triangular or V-shaped depression in front, irregularly transversely depressed behind, and often with a smooth median ridge or channel, the surface finely and densely punctured (in some examples less closely so); elytra very elongate, very densely and minutely punctured, the apices separately rounded; beneath very densely punctured, thickly pubescent, testaceous, the venter, and sometimes the coxæ, more or less suffused with violaceous; legs blackish-violaceous, the femora often in great part testaceous.

♂. Fifth ventral segment very deeply triangularly emarginate; the sixth with two very large spoon-shaped pieces, these latter hairy within.

Length 13–19 millim. (♂ ♀.)

Hab. Mexico, Misantla (*Höge*); Guatemala, Sinanja, Sabo, Purula, and San Gerónimo in Vera Paz (*Champion*), Vera Paz (*Conradt*).

Ten male and three female examples; the single specimen (♀) from Mexico has the head and elytra violaceous. The localities for this species are all upon the Atlantic slope.

Our figure is taken from a typical male specimen from Sinanja.

2. **Diplectroides flavicollis.** (Tab. VI. fig. 6, ♀.)

Elongate, black or brownish-black, the head and scutellum brownish in one example, the prothorax flavous; the upper surface finely pubescent, the head and prothorax shining, the elytra opaque. Head very finely and closely punctured, the eyes (♀) moderately large and rather widely separated; antennæ (♀) blackish-brown or brown, moderately long; prothorax (♀) rather broader than long, moderately rounded at the sides in front and constricted behind, the base and apex somewhat strongly margined, the hind angles prominent, the disc a little flattened, transversely depressed on each side in front and also about the middle, depressed in the centre at the base, and with traces of a smooth median ridge, the surface very minutely, shallowly, and closely punctured; elytra shorter than in *D. longicornis*, scabrous, the apices obtuse; beneath, the prothorax excepted, black or brownish, pubescent, finely scabrous; legs black or brownish.

Length 14½–16½ millim. (♀).

Hab. Mexico, Peras, Parada (*Sallé*).

Two female examples. Differs from the corresponding sex of *D. longicornis* in the smaller and more widely separated eyes, much more finely punctured head and thorax, the latter broader than long, shorter and stouter antennæ, shorter and more scabrous elytra, shorter legs, and different colour.

VASACES.

Mandibles bifid; last joint of the maxillary palpi long, elongate-triangular (*V. æneipennis*, *V. sordidus*) or cultriform with the outer edge sinuate (*V. costatus*), that of the labial palpi subtriangular; mentum about twice as broad as long; eyes somewhat coarsely granulated, rather small, oblique, very widely separated in both sexes, rather distant from the point of insertion of the antennæ, and, at most, very slightly emarginate; head about as broad as the prothorax, a little broader in the male, rather produced in front; antennæ filiform, long, slender, 11-jointed in both sexes—1 stout or moderately stout, about as long as 3, 2 about half the length of 3 (in *V. sordidus*, ♀, nearly as long as it), 3 shorter than 4, the succeeding

joints very elongate, 11 slightly emarginate at the middle; prothorax subquadrate, at least as wide at the base as at the apex, the sides a little rounded in front and, at most, moderately constricted behind; elytra considerably broader than the prothorax, elongate and parallel, with regular raised lines or costæ; legs very long and slender, the tibiæ each with two rather long spurs; joints 1–4 of the anterior and intermediate and 3 of the posterior tarsi, more or less (*V. æneipennis*), or the penultimate one only of all the tarsi (*V. sordidus* and *V. costatus*), spongy-tomentose beneath; claws simple. Male with the fifth ventral segment very deeply triangularly emarginate; the ventral portion of the sixth segment with a spatuliform lobe on each side which extends beyond the fifth segment (this being very long in *V. æneipennis* and short in *V. costatus*), the dorsal portion furnished on each side with a quite slender and very much shorter lobe, each of the lobes fringed with long hairs at the apex.

Closely allied to and of the general form of *Xanthochroa*; but differing in the anterior tibiæ having two spurs, and in the antennæ being 11-jointed in both sexes, and with joint 2 more elongate, at least half the length of 3, the latter shorter than 4. The three species from Central America referred to *Vasaces* have somewhat the facies of a female of the genus *Dryops*, from which they differ in the more transverse eyes, more quadrate thorax, longer tibial spurs, much longer second joint of the antennæ, broader apical joint of the maxillary palpi, &c.

Species of *Xanthochroa* have been recorded from the United States and from Colombia, as well as from Europe and Japan, and Lacordaire states (Gen. Col. v. p. 705) that numerous others from South America exist in collections; no species of Œdemeridæ from Central America described in this work agrees sufficiently well with *Xanthochroa* to be included in it, and it is very possible that the South-American forms are not really congeneric.

* *Apical joint of the maxillary palpi elongate-triangular.*

1. **Vasaces æneipennis.** (Tab. VI. figg. 7, ♂; 7 *a*, labium; 7 *b*, maxilla and maxillary palpus; 7 *c*, œdeagus.)

Very elongate, finely pubescent, slightly shining, testaceous or reddish-testaceous, the head in the middle, the eyes, the tips of the mandibles, and the disc and sides of the prothorax more or less piceous, the scutellum flavous, the elytra of a brassy tint or brassy with a faint cupreous tinge. Head very closely and finely punctured, the eyes feebly emarginate; antennæ testaceous, joint 1 stout, 1 and 3 about equal in length, 2 rather more than half the length of 3, 3 much shorter than 4 (11 missing); prothorax about as long as or rather longer than broad, moderately constricted behind (less distinctly so in one specimen), the base and apex with prominent margin and very feebly emarginate in the middle, the disc deeply transversely depressed in front and behind, with a rather deep sinuous groove on each side, and more or less canaliculate, or with a slightly raised median ridge, in the centre, the surface very finely and densely punctured, more sparsely so on the disc; elytra very elongate, densely and finely punctured, the punctures more or less confluent, each with four distinct raised lines or costæ extending from the base nearly to the apex, the suture also a little raised, the apices separately rounded; beneath densely and minutely punctured, finely pubescent, testaceous, the metasternum and venter (and in one example the prothorax) stained with piceous or obscure æneous; legs entirely testaceous; fifth ventral segment emarginate in the middle in both sexes.

♂. Fifth ventral segment deeply triangularly emarginate; the sixth with a very long spatulate lobe on each side, and the dorsal portion of the same segment furnished with a very slender and much shorter spatulate appendage.

Length 16 millim. (♂ ♀.)

Hab. Mexico, Totosinapan (*Sallé*).

Two examples only, both imperfect. Labelled *Copidita*, sp., in the Sallé collection. *V. æneipennis* is about the size and facies of *Dryops femorata*, Fabr., ♀.

2. **Vasaces sordidus.**

Very elongate, narrow, finely and sparsely pubescent, slightly shining, pale testaceous. Head rather sparsely and moderately finely punctured, slightly infuscate on the middle of the vertex, the tips of the mandibles and the eyes black, the latter feebly sinuate on their inner edge; antennæ (♀) elongate, slender, reaching to beyond the middle of the elytra, testaceous, the basal half of each joint darker, joints 1 and 3 about equal in length, 1 slender, 2 a little shorter than 3, 3 a little shorter than 4, 11 feebly sinuate at the middle and somewhat pointed at the apex; prothorax longer than broad, the sides feebly emarginate behind and a little rounded anteriorly, the disc with a sinuous groove on each side, a short longitudinal groove in the middle in front, and a transverse depression just before the base, the basal margin a little raised, the surface thickly, finely, and very distinctly punctured; elytra moderately long, somewhat attenuate at the apex, shallowly, densely, and finely punctured, each with four distinct raised lines or costæ extending from the base nearly to the apex, the suture also raised, the costæ and suture each with an indistinct interrupted row of fine oblong fuscous streaks on either side; beneath testaceous; legs very slender, pallid testaceous, the knees, the apices of the tibiæ, and the tarsi a little darker.

Length 8½ millim. (♀.)

Hab. GUATEMALA, Capetillo (*Champion*).

One immature female example. Smaller than *V. costatus*; the head and thorax more coarsely, the elytra much more shallowly and less densely punctured, the latter more acuminate behind and of the same colour as the thorax. The last joint of the maxillary palpi is also very differently shaped, it being triangular and formed very much as in *V. æneipennis*; but it is shorter than in that insect.

** *Apical joint of the maxillary palpi cultriform, its outer edge sinuate.*

3. **Vasaces costatus.** (Tab. VI. fig. 8, ♂.)

Elongate, finely pubescent, slightly shining, testaceous, the head in the middle and the disc and sides (very narrowly and indistinctly) of the prothorax of a brassy tint, the elytra brassy. Head closely and minutely punctured, and with a feeble transverse elevation on each side between the points of insertion of the antennæ, the tips of the mandibles and the eyes black, the latter merely sinuate on their inner edge; antennæ (♂) exceedingly elongate and slender, nearly reaching the apex of the elytra, fusco-testaceous, the basal joint and the apices of the others testaceous, joint 1 stout, 1 and 3 about equal in length, 2 more than half the length of 3, 3 much shorter than 4, 11 feebly sinuate at the middle and blunt at the apex; prothorax longer than broad, the sides very feebly emarginate behind and only very slightly rounded in front, the base and apex very feebly emarginate in the middle and without prominent margin, the disc finely canaliculate, with a distinct **V**-shaped depression in the middle in front, on either side of which is an oblique groove, and a transverse depression in the centre and another before the base, the surface almost smooth (when viewed under a strong lens, very minutely and densely punctured); elytra moderately elongate, very densely and finely punctured (the punctures more or less confluent), each with four distinct raised lines or costæ extending from the base nearly to the apex, the suture also a little raised, the apices separately rounded and obtuse; beneath very closely and finely punctured, finely pubescent, testaceous, the flanks of the prothorax, the metasternum, and venter much suffused with piceo-æneous; legs testaceous, the tarsi a little darker.

♂. Fifth ventral segment deeply triangularly emarginate; the sixth with a short spoon-shaped piece on each side, the dorsal portion of the same segment furnished on each side with a slender appendage.

Length 9⅓ millim. (♂.)

Hab. GUATEMALA, Cerro Zunil 4000 feet (*Champion*).

One male example. Much smaller than *V. æneipennis*; the eyes almost entire; the elytra less elongate; the antennæ longer and more slender; the tarsi more slender; the sixth ventral segment and last joint of the maxillary palpi differently shaped.

SISENES.

Mandibles bifid; last joint of the maxillary palpi long and narrow, narrowly ovate or widening a little outwardly, with the apex very oblique and truncate or somewhat rounded, that of the labial palpi subtriangular, with the apex more or less truncate or rounded; eyes finely granulated, more or less prominent—larger, more transverse, more convex, and more deeply emarginate in *S. cyanipennis* and *S. boops*, more oblong, moderate or small, and feebly emarginate in the other species; head as broad as or broader than, and not deeply sunk into, the prothorax, a little prolonged in front, the mandibles long and exposed and the labrum large; antennæ 11-jointed in both sexes, tapering a little outwardly, filiform, or with joints 3–5 thickened in the female or in both sexes, the eleventh joint often a little constricted beyond the middle; prothorax about as long as broad with the sides moderately constricted behind, or subquadrate with the sides almost straight behind, at least as broad at the base as at the apex, the disc usually with one or two transverse grooves or depressions on each side; elytra long or moderately long, subparallel—in some few species flatter and in one or both sexes widening to beyond the middle,—with series of double lines or fine costæ; legs moderately long, stout in a few species (*S. cyanipennis* &c.), slender in others; femora similar in both sexes; tibiæ each with two long spurs; tarsi in some species with joints 1–4 or 2–4 of the front and middle pairs and 2 and 3 or 3 of the hind pair, or in others with the penultimate joint only, furnished with a brush of short hairs beneath; claws very feebly dilated at the base within. Male with the fifth ventral segment in some species deeply, in others feebly, emarginate in the middle; sixth ventral segment with long or short lateral lobes, these often projecting beyond the fifth segment.

Numerous species from Central America are referred to this genus, and it will in all probability prove to be equally well represented in South America. The narrower and differently shaped apical joint of the maxillary palpi and other particulars distinguish it from *Diplectrus*, *Vasaces*, *Copidita*, *Asclera*, &c.; the eleven-jointed antennæ in the male and the two-spurred anterior tibiæ separate it from *Nacerdes* and *Xanthochroa*; and the finely granulated and rather prominent eyes, bifid mandibles, narrow apical joint of the maxillary palpi, and more quadrate thorax distinguish it from *Oxacis*.

Several groups of species are indicated, these differing from one another in the form of the antennæ, extent of emargination and form of the eye, and in the clothing of the soles of the tarsi; but as they are connected by various gradations it is not advisable to separate them. The different species vary in size, but are mostly small; the majority have much the facies of various genera of Telephoridæ, and in these species the antennæ taper very slightly or are more or less filiform, while a few resemble Lycidæ, these latter having joints 3–5 of the antennæ thickened or dilated. One, *S. lineatocollis*, has these joints thickened in the female only. In *S. cyanipennis* the tarsi are formed and clothed somewhat as in *Diplectrus* (from which the narrower last joint of the maxillary palpi and different male-characters distinguish it); *S. boops* and *S. varians* are inter-

mediate in this respect between *S. cyanipennis* and the numerous species with the penultimate joint only of the tarsi tomentose beneath.

The Lyciform species have the antennæ formed very much as in the Chilian genus *Mecopselaphus*; the latter, however, has a Lampyriform facies (it was included in the Malacoderms by its describer), the head more exserted and longer, and the thorax very differently shaped; *Mecopselaphus lycoides*, Kirsch, from Peru, is, no doubt, congeneric with these aberrant mimetic forms.

The members of this genus are all well defined, though in several the elytra vary very considerably in colour. They are found upon leaves or herbage.

1. *Antennæ very gradually tapering outwardly or filiform in both sexes. Species Telephoriform.*

a. *Tarsi with joints* 1–4 *of the front and middle pairs and* 2 *and* 3 *or* 3 *of the hind pair tomentose beneath; eyes comparatively large, rather deeply emarginate; elytra with series of faintly impressed double lines.*

1. **Sisenes cyanipennis.** (Tab. VI. figg. 9, ♂; 9 *a*, labium; 9 *b*, maxilla and maxillary palpus; 9 *c*, œdeagus.)

Elongate, finely pubescent, opaque, the head and elytra blackish-violaceous or dark cyaneous, the prothorax and scutellum orange or orange-yellow. Head densely and coarsely punctured; eyes large and convex, more contiguous in the male, rather deeply emarginate, the canthus smooth; antennæ long and stout, tapering outwardly, black, joint 2 about one-third of the length of 3, 3 and 4 subequal; prothorax about as long as broad in the male, transverse in the female, somewhat convex, the sides rounded in front and converging behind, the hind angles prominent, the base rather strongly margined, the disc feebly transversely depressed before the apex, transversely depressed at the base, and sometimes with a shallow depression on each side about the middle, the surface densely and not very finely punctured; elytra moderately long, broadest at the base, the sides straight and gradually converging, the apices obtuse, the surface scabrous and with indistinctly-marked series of double lines on the disc; beneath clothed with longer pubescence, orange-yellow, the venter, and coxæ in part, violaceous or cæruleous, finely and densely punctured; legs stout, thickly pubescent, moderately long, blackish-violaceous, joints 1–4 of the anterior and middle tarsi and 2 and 3 of the hind tarsi clothed with a thick pad of short hairs beneath.

♂. Fifth ventral segment deeply triangularly emarginate; the sixth with the lateral lobes very large and spoon-shaped, these resting one over the other in repose and protruding beyond the fifth.

Length 12–14 millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Belt*, *Janson*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Seven examples. This very distinct species somewhat resembles *Diplectroides flavicollis*, from which its less elongate shape, more coarsely punctured head and prothorax, shorter and stouter limbs, and violaceous colour distinguish it, apart from the differences in the form of the mandibles, palpi, &c; the sixth ventral segment of the male is very similarly shaped.

2. **Sisenes boops.** (Tab. VI. fig. 10, ♂.)

Elongate, opaque, the head, scutellum, and elytra dark violaceous, the prothorax reddish-yellow slightly stained with violaceous along the middle of the disc, the oral organs fusco-testaceous; the head in front and the prothorax thickly clothed with rather long yellowish, the elytra with fine cinereous, pubescence. Head densely and rather coarsely punctured, somewhat concave between the eyes, the latter (♂) large, convex, very prominent, and rather deeply emarginate, the canthus smooth; antennæ (♂) stout, very long, reaching to the end of the elytra, slightly tapering outwardly, black, the two basal joints testaceous beneath, joint 2 one-third the length of 3, 3 and 4 subequal, 5–11 very elongate; prothorax a little broader than long, the sides rounded in front, constricted behind, and with an oblique groove about the middle running inwards, the disc obsoletely canaliculate, with a large and broad excavation in front extending nearly to the sides, and largely depressed in the middle behind, the depression limited on each side by a sinuous groove and at the base by a deeper transverse one which extends to the lateral margin, the space between the frontal and basal depressions raised on each side into a transverse sinuous callus which meets the opposite one in the middle of the disc, the surface densely and finely punctured, the base with prominent margin, the hind angles acute; elytra moderately long, broadest at the base, flattened on the disc, the sides rectilinear, the apices obtuse, the surface scabrous and with finely impressed series of double lines on the disc; beneath thickly clothed with long cinereous pubescence, violaceous, the sides and front of the prothorax reddish-yellow, finely and very densely punctured; legs rather slender, black, and thickly clothed with ashy pubescence; joints 1–4 of the front and middle tarsi and 3 of the hind tarsi tomentose beneath.

♂. Fifth ventral segment deeply triangularly emarginate; the sixth with the lateral lobes large and spoon-shaped, these resting one over the other in repose and protruding beyond the fifth.

Length 9 millim. (♂.)

Hab. Mexico, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

One male example. This species is not closely allied to any other here enumerated. The large eyes, deeply excavate and nodose thorax, long antennæ, and other particulars described above distinguish it at a glance.

b. *Tarsi with joints* 2–4 *of the front and middle pairs and* 3 *of the hind pair tomentose beneath; eyes smaller, feebly emarginate; elytra with fine costæ.*

3. **Sisenes varians.** (Tab. VI. fig. 11, ♂.)

Elongate, opaque, thickly pubescent, flavo- or reddish-testaceous, the prothorax often of a more orange tint; the head in great part (except the middle of the base and in front) and the eyes piceous or black, the labrum, tips of the mandibles, and middle of the epistoma piceous; the prothorax in some examples stained with piceous at the sides; the scutellum flavous; the elytra with the apical third, and often a large elongate-triangular scutellar patch as well, piceous, in one example entirely of this colour. Head very densely and finely punctured, the eyes rather small and feebly emarginate; antennæ black, of a browner tint towards the apex, moderately long, not very slender, tapering a little outwardly, joint 2 one-third of the length of 3, 3 and the following joints subequal; prothorax rather longer than broad, the apex rounded and somewhat extended forwards in the middle, the sides rounded in front and converging behind, the base grooved within and with prominent margin, the hind angles acute, the disc with a deep oblique excavation on each side about the middle, broadly and shallowly transversely depressed in front, transversely depressed in the middle before the base, and with a more or less distinct median ridge, the surface densely and finely punctured; elytra moderately long, broadest at the base, subparallel, very densely and finely punctured, and with two costæ on the disc and one at the sides, the two outer ones nearly reaching the apex and the inner one extending to a little beyond the middle, the suture also raised; beneath thickly pubescent, testaceous, the sides of the prothorax, metasternum, and venter often much stained with piceous, densely and minutely punctured; legs slender, piceous, the basal half or two-thirds of the femora testaceous; joints 2–4 of the front and middle tarsi and 3 of the hind tarsi tomentose beneath.

♂. Fifth ventral segment very deeply and broadly emarginate (the emargination extending across two-thirds of the segment); the sixth with the lateral lobes large and spoon-shaped, these resting one over the other in repose and protruding beyond the fifth.

Length 9–10 millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt*).

One male and five female examples. The thorax, elytra, and under surface vary in the extent of the dark markings, while the head is constant in colour in all the forms; the elytra have at least the apex piceous or black. In the example with dark elytra the thorax is wholly reddish-yellow.

4. **Sisenes suffusus.** (Tab. VI. fig. 12, ♀, var.)

Elongate, subopaque, finely and thickly pubescent, testaceous or flavo-testaceous; the head with the basal half obscure æneous and the labrum, tips of the mandibles, and eyes piceous, sometimes with the vertex only obscure æneous, sometimes entirely testaceous; the prothorax usually entirely testaceous or flavo-testaceous, sometimes with the disc or anterior portion more or less obscurely æneous; the scutellum testaceous; the elytra very variable in colour—cyaneo-violaceous or greenish-æneous with a broad pale flavous vitta on the disc of each elytron extending from a little below the base nearly to the apex, entirely greenish-æneous, greenish-æneous with an obscure stripe on each elytron at the base (or with the basal portion much suffused with) testaceous, or testaceous with the sides and apical third slightly suffused with greenish-æneous. Head densely and somewhat coarsely punctured, rather broader in the male; eyes small, rather convex, feebly emarginate, very widely separated in both sexes; antennæ very slender, long, and filiform, piceous, lighter towards the base, joint 2 rather more than one-third the length of 3, 3 and the following joints very elongate and subequal; prothorax about as broad as long, the sides rounded in front and moderately constricted behind, the base grooved within and with prominent margin, the disc broadly and shallowly transversely depressed in front, with a rather large and deep oblique depression on each side just behind the middle, and a more or less distinct median ridge, the surface densely and rather coarsely punctured; elytra moderately long, subparallel, densely and rather coarsely punctured, and with two fine costæ on the disc and one at the sides, the two outer ones nearly reaching the apex and the inner one extending to a little beyond the middle, the suture also raised; beneath flavo-testaceous, the venter sometimes stained with æneo-piceous, pubescent, shining, very shallowly and minutely punctured; legs slender, testaceous, the tarsi, tibiæ, and the apical portion of the femora often more or less stained with piceous; joints 2–4 of the front and middle tarsi and 3 of the hind tarsi tomentose beneath.

♂. Fifth ventral segment narrowly and rather deeply emarginate; the sixth with the lateral lobes long and spoon-shaped and protruding beyond the fifth.

Length $6\frac{1}{2}$–$9\frac{1}{3}$ millim. (♂ ♀.)

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Sinanja and Chacoj in Vera Paz (*Champion*).

Fifteen examples, three from Mexico, the rest from Guatemala; of these, four, one from Chacoj and three from Cordova (one of which is figured), have a well-defined pale flavous longitudinal vitta on each elytron, and the apex of the femora more distinctly marked with piceous, the Mexican specimens having the ground-colour of the elytra cyaneous instead of greenish-æneous. The numerous varieties are connected by various intermediate forms.

c. *Tarsi with the penultimate joint only tomentose beneath; eyes feebly emarginate; elytra with fine costæ.*

5. **Sisenes parasiloides.** (Tab. VI. fig. 13, ♂.)

Elongate, narrow, finely and thickly pubescent, opaque, the head and prothorax slightly shining, testaceous or flavo-testaceous, the prothorax sometimes with a faint æneous or cupreous lustre, the apical half, two-thirds, or three-fourths of the elytra black or piceous (this colour usually extending more or less up the suture and cut off obliquely from the pale basal portion). Head thickly and somewhat coarsely punctured, broader than the prothorax in both sexes, the eyes small, the latter and the palpi slightly stained with piceous; antennæ long and very slender, filiform, piceous, the two basal joints (and sometimes the extreme base of the others) fusco-testaceous, joint 2 about half the length of 3; prothorax about as long as broad, the sides moderately rounded in front and converging behind, the base grooved within and with prominent margin, the disc shallowly transversely depressed in front, with a shallow oblique depression on each side behind the middle, and a more or less distinct smooth median line or ridge, the surface closely and rather coarsely punctured; elytra moderately long, parallel, densely and rather coarsely punctured, and with two fine vague costæ on the disc and one at the sides, the two outer ones nearly reaching the apex and the inner one extending to a little beyond the middle, the suture also a little raised; beneath flavo-testaceous, the apical two or three segments of the venter usually æneo-piceous, pubescent, shining, very finely punctured; legs slender, testaceous, the apices of the tibiæ and the tarsi sometimes stained with piceous, the penultimate joint of the tarsi tomentose beneath.

♂. Fifth ventral segment broadly and shallowly triangularly emarginate; the sixth with the lateral lobes short, hairy, and projecting beyond the fifth.

Length 5½–7 millim. (♂ ♀.)

Hab. GUATEMALA, Purula and Sinanja in Vera Paz (*Champion*).

This insect has much the general facies of the Malacoderm-genus *Parasilis*, two species of which inhabit Central America. *S. parasiloides* is closely allied to *S. suffusus*, but is smaller and differently coloured; the head and thorax are not so densely punctured and are less opaque, the oblique depression on each side of the disc of the latter being much shallower; the antennæ are more slender; and the sixth ventral segment of the male is very differently shaped.

Numerous examples, all captured in the humid forest-region of the Atlantic slope.

6. **Sisenes vittatipennis.** (Tab. VI. fig. 14, ♀.)

Elongate, finely and thickly pubescent, opaque, the head and prothorax (when denuded of pubescence) rather shining; the head æneous or greenish-æneous, with the anterior portion or the sides of the front yellowish, the labrum and the tips of the mandibles piceous; the prothorax cyaneous, with the disc violaceous, the elevated transverse space before the middle æneous, and the sides flavous at the base, or testaceous with the disc greenish-æneous; the elytra bluish-black with the disc dark brown, or brown with an æneous lustre, and with a narrow sordid yellow stripe extending from the shoulders nearly to the apex, and the suture also a little lighter in colour. Head very closely and finely punctured, the eyes oblong and rather large but not prominent; antennæ piceous or fusco-testaceous, very long, slender, and filiform, extending nearly to the end of the elytra in both sexes, joint 2 one-third of the length of 3, the succeeding joints very elongate; prothorax a little longer than broad, the sides moderately rounded in front and converging behind, the base grooved within and the margin prominent, the disc shallowly transversely depressed in front, with a deep oblique depression on each side behind the middle, and a more or less distinct median ridge, the surface very closely and finely punctured; elytra long, parallel, densely and rather coarsely punctured, and with two fine costæ on the disc and one at the sides, the two outer ones nearly reaching the apex and enclosing the yellowish vitta and the inner one extending to a little beyond the middle, the suture also

raised; beneath closely punctured and thickly clothed with long ashy pubescence, fusco-testaceous, the metasternum and the venter stained with æneous; legs slender, piceous, the base of the femora and of the tibiæ lighter, the penultimate joint of the tarsi tomentose beneath.

♂. Fifth ventral segment very deeply emarginate; the sixth with the lateral lobes long and spoon-shaped and protruding beyond the fifth.

Length $7\frac{1}{2}$–$8\frac{1}{3}$ millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Belt*); Panama, Volcan de Chiriqui 3000 feet (*Champion*).

A male from Nicaragua and a female from Chiriqui. From the striped form of *S. suffusus* this species may be distinguished by the closer and finer punctuation of the head and thorax; the elytral vitta is narrower, placed nearer the lateral margin, and extends upwards to the shoulder; the legs are darker, the eyes larger and more oblong, the antennæ longer, the under surface duller and more pubescent, and the fifth ventral segment in the male more deeply emarginate.

The Chiriqui specimen is figured.

7. **Sisenes rubricollis.** (Tab. VI. fig. 15, ♂.)

Elongate, finely and thickly pubescent, opaque, the elytra and the greater part of the head black or piceous-brown, the latter with the anterior part (the labrum and the tips of the mandibles excepted) flavous and the posterior part sometimes of a more æneous tint, the prothorax dull red or rosy-red. Head very densely and moderately finely punctured, the eyes rather small but prominent, the palpi fusco-testaceous; antennæ long and filiform, about reaching the middle of the elytra in the female, longer in the male, joint 2 rather more than one-third of the length of 3, black, the two basal joints sometimes testaceous beneath; prothorax about as long as broad, the sides moderately rounded in front and a little constricted behind, the base grooved within and with rather prominent margin, the disc shallowly transversely depressed in front, with a rather deep oblique depression on each side behind the middle, and a more or less distinct median ridge, the surface very densely and moderately finely punctured; elytra long, more parallel in the male than in the female, densely and somewhat roughly punctured, and with two fine costæ on the disc and one at the sides, the two outer ones nearly reaching the apex and the inner one extending to a little beyond the middle, the suture also raised; beneath slightly shining, thickly pubescent, variable in colour—usually flavo-testaceous with the metasternum and the sides of the venter piceous or æneo-piceous, sometimes in great part piceous, the lower part of the flanks of the prothorax violaceous and smooth, the rest of the surface closely and finely punctured; legs slender, varying in colour from piceous to fusco-testaceous, the penultimate joint of the tarsi tomentose beneath, the hind tibiæ in some examples slightly curved or sinuous.

♂. Fifth ventral segment deeply triangularly emarginate; the sixth with the lateral lobes long and spoon-shaped and protruding beyond the fifth.

Length $6\frac{1}{2}$–$8\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*), Jalapa, Oaxaca (*Höge*), Atoyac in Vera Cruz (*Schumann*).

This species is apparently common on the Atlantic slope of Southern Mexico, whence we have received many specimens. *S. rubricollis* is allied to *S. suffusus*, from which its more densely and less coarsely punctured head and thorax, duller and more closely and more distinctly punctured under surface, more deeply emarginate fifth ventral segment in the male, and more opaque and differently coloured upper surface distinguish it at once. The specimens in the Sallé collection are labelled with the inapplicable MS. name of *Asclera rufiventris*, Chevr.

8. **Sisenes sinanjæ.** (Tab. VI. fig. 16, ♀, var.)

Closely allied to *S. rubricollis*; the elytra variable in colour—bluish-black, blackish-brown, or brownish-yellow; the head greenish-æneous or brownish, with the anterior part (the labrum and the tips of the mandibles excepted, these parts being piceous) flavous; the antennæ black, very long and slender, reaching to far beyond the middle of the elytra in both sexes; the prothorax rosy-red or reddish-yellow, sometimes with a coppery lustre; the head and prothorax sparsely pubescent, very slightly shining, and much more coarsely and less densely punctured than in *S. rubricollis*; legs variable in colour—black or piceous-brown, in the examples with pale elytra with the basal half of the four hinder femora, and the inner part of the anterior femora nearly to the apex, testaceous; beneath thickly pubescent, very closely and finely punctured, flavo-testaceous in light-coloured examples and almost entirely piceous in dark-coloured ones, the flanks of the prothorax more or less suffused with cyaneous or violaceous; the rest as in *S. rubricollis*.

♂. Fifth ventral segment very deeply triangularly emarginate; the sixth with the lateral lobes long and spoon-shaped and protruding far beyond the apex of the fifth.

Length 7½–9 millim. (♂ ♀.)

Hab. Guatemala, Sinanja and Senahu in Vera Paz (*Champion*).

One male and three female examples; the elytra are in two examples brownish-yellow and in the other two (♂ ♀) bluish-black or blackish-brown. As in *S. rubricollis*, the flanks of the prothorax are more or less stained with violaceous and almost bare. The very different sculpture of the head and thorax, longer and more slender antennæ, and other particulars, separate it easily from *S. rubricollis*. The latter has the head and elytra very constant in colour, while in the present insect the reverse is the case.

9. **Sisenes telephoroides.**

Elongate, finely pubescent, subopaque, the head and prothorax slightly shining; the head bronze or greenish-bronze, the anterior part flavous, the labrum and tips of the mandibles piceous; the prothorax orange-yellow; the scutellum flavous or piceous; the elytra bronze-black or blackish-violaceous, sometimes of a plumbeous tint. Head distinctly broader than the prothorax, still broader in the male, closely and rather coarsely punctured, the eyes small; antennæ moderately long, comparatively stout, black or piceous-brown, joint 2 not half the length of 3; prothorax as long as broad, shorter in some examples, the sides moderately rounded in front and feebly constricted behind, the base grooved within the prominent margin, the disc broadly transversely depressed in front, with a shallow depression on each side behind the middle (not always distinct), and an interrupted median ridge, the surface closely and rather coarsely punctured; elytra moderately long, parallel, densely, confluently, and rather coarsely punctured, and with one costa on the disc (the usual one between this and the suture obsolete) and another at the sides, the inner one of these obliterated beyond the middle in some specimens and in others continued nearly to the apex, the suture also raised; beneath closely and finely punctured and pubescent, the meso- and metasternum and the venter (except in the middle) æneous or æneo-piceous, the rest flavous; legs slender, variable in colour—piceous or brown with the base of the femora more or less testaceous, in some examples with the basal half or two-thirds of the latter abruptly flavous—the penultimate joint of the tarsi tomentose beneath.

♂. Fifth ventral segment broadly and very feebly emarginate; the sixth with the lateral lobes short.

Length 4½–6½ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*), Misantla (*F. D. G.*).

This insect greatly resembles certain similarly-coloured Central-American species of *Silis* and *Telephorus*. The ten specimens obtained vary a good deal *inter se*: in some

of them the second costa on the elytra is continued nearly to the apex, and in others it only reaches to about the middle; the usual first costa is obsolete in all.

10. **Sisenes viridipennis.**

Moderately elongate, finely pubescent, subopaque; the head bronze, the anterior part flavous, the labrum and the tips of the mandibles and of the palpi piceous; the prothorax yellowish-red; the scutellum and elytra brassy-green or green. Head broader than the prothorax, densely and rather coarsely punctured, the eyes small; antennæ black or piceous-brown, moderately long, filiform, rather stout, joint 2 nearly half as long as 3; prothorax a little broader than long, the sides moderately rounded in front and feebly constricted behind, the base grooved within, the disc shallowly transversely depressed in front, with a shallow oblique depression on each side behind the middle, and sometimes with traces of a smooth median line or ridge, the surface densely and finely punctured; elytra moderately long, parallel, densely and rather finely punctured, and with two fine costæ on the disc and one at the sides, the two outer ones nearly reaching the apex and the inner one extending nearly to the middle, the suture also raised; beneath closely and finely punctured and pubescent, obscure æneous, the prothorax coloured as above but with the lower part of the flanks æneous; legs slender, piceous, the basal two-thirds of the femora, and sometimes the tibiæ in part, testaceous, the penultimate joint of the tarsi tomentose beneath.

Length $4\frac{3}{4}$–$5\frac{1}{3}$ millim. (♀.)

Hab. GUATEMALA, Sinanja in Vera Paz (*Champion*).

Four examples. Closely allied to the Mexican *S. telephoroides*, and differing thus:—The thorax more densely and much more finely punctured (especially noticeable at the sides), the head also more finely and more closely punctate; the elytra green or brassy-green, and with the usual first costa distinct towards the base.

11. **Sisenes testaceipes.** (Tab. VI. fig. 17, ♀.)

Moderately elongate, finely and thickly pubescent, opaque; the head and prothorax reddish-yellow, the eyes black; the scutellum flavous or piceous; the elytra brassy-green (in one example violaceous), the colour much hidden by the dense ashy pubescence. Head broad, a little wider than the prothorax, very closely and coarsely punctured, the eyes small; antennæ moderately long, rather stout, filiform, reddish-yellow (in one example piceous-brown with the basal joint testaceous), joint 2 not half the length of 3, 11 very distinctly constricted beyond the middle; prothorax comparatively broad, transverse, the sides moderately rounded in front and feebly constricted behind, the base grooved within, the disc with a shallow oblique depression on each side behind the middle, an indistinct very shallow transverse depression on either side in front of this, and traces of a fine median ridge (the depressions almost, and the median ridge quite, obsolete in one example), the surface closely and rather coarsely punctured; elytra moderately long, parallel, densely and rather coarsely punctured, and with two fine costæ on the disc and one at the sides, the two outer ones extending nearly to the apex and the inner one to about the middle, the suture also raised; beneath closely and finely punctured and pubescent, obscure æneous or violaceous, the head and prothorax reddish-yellow; legs, including the coxæ, flavous or reddish-yellow, moderately slender.

Length $5\frac{2}{3}$–$6\frac{1}{3}$ millim. (♀.)

Hab. NICARAGUA, Chontales (*Belt*); PANAMA, Volcan de Chiriqui 4000 feet (*Champion*).

Two examples from Chiriqui and one from Nicaragua (the latter in a mutilated condition), apparently all females. The Nicaraguan specimen has the elytra violaceous and the antennæ darker, but otherwise agrees with those from Chiriqui. The reddish-yellow head, oral organs, legs, and antennæ, differently-coloured elytra, more transverse

thorax, and broader head distinguish *S. testaceipes* from *S. telephoroides*. A Chiriqui example is figured.

12. **Sisenes puncticollis.**

Elongate, finely pubescent, slightly shining; the head bronze, the anterior part reddish-yellow, the labrum and tips of the mandibles piceous; the prothorax reddish-yellow; the elytra piceous with an æneous lustre. Head broader than the prothorax, closely and coarsely punctured, the eyes small; antennæ brownish-ferruginous, moderately long, rather stout, joint 2 not half the length of 3; prothorax narrow, as long as broad, the sides rounded in front and moderately constricted behind, the base grooved within, the hind angles prominent, the disc very shallowly transversely depressed on each side in front (the usual oblique depression on each side behind the middle obsolete), the entire surface closely and coarsely punctured; elytra long and parallel, densely, coarsely, and confluently punctured, and with one costa on the disc (the usual one between this and the suture obsolete) and one at the sides, the suture also raised; beneath (the head and prothorax excepted) æneo-piceous, very closely and finely punctured and pubescent; legs slender, piceous-brown, the femora darker, the penultimate joint of the tarsi tomentose beneath.
Length $5\frac{1}{4}$ millim.

Hab. Mexico, Oaxaca (*Höge*).

One example, apparently a female. The more shining, almost unimpressed, more coarsely and more deeply punctured, rather narrower thorax, and the more coarsely sculptured and less opaque elytra distinguish this species from *S. telephoroides*.

13. **Sisenes foveatus.** (Tab. VI. fig. 18, ♀.)

Elongate, finely pubescent, subopaque, the prothorax shining; the head greenish-æneous or red with the extreme base piceous, the anterior portion yellowish or red, the labrum, tips of the mandibles, and palpi piceous; the prothorax red with a coppery lustre; the elytra blackish-violaceous. Head closely and comparatively coarsely punctured, the eyes small; antennæ black, moderately long, rather stout, joint 2 about half the length of 3; prothorax nearly as long as broad, the sides moderately rounded in front and feebly constricted behind, the base deeply grooved within and with prominent margin, the disc with a broad deep transverse depression on each side in front, a very deep, laterally extended, and more sinuous one on each side just behind the middle, and an interrupted median ridge, the surface coarsely and rather sparsely punctured, the transverse sinuous elevations separating the deep depressions smoother; elytra moderately long, parallel, densely and rather coarsely punctured, and with two fine sharply defined costæ on the disc and one at the sides, the inner one abbreviated before the apex, the suture also raised; beneath (the prothorax excepted) æneo-piceous, finely and closely punctured and pubescent; legs black, slender, the penultimate joint of the tarsi tomentose beneath.
Length $6\frac{1}{3}$–$6\frac{1}{2}$ millim. (♀.)

Hab. Mexico (*Sallé*), Oaxaca (*Höge*).

Two female examples. The shining, very deeply excavate, and coarsely and sparsely punctured thorax distinguishes this small species at once from the other similarly-coloured members of the genus.

14. **Sisenes thoracicus.**

Moderately elongate, finely pubescent, opaque; the head bronze, the sides of the front testaceous, the labrum and palpi piceous; the prothorax rosy-red, the basal margin violaceous in the middle; the scutellum and elytra piceous-brown with a brassy lustre. Head a little broader than the prothorax, densely and rather coarsely punctured, the eyes small; antennæ black, very stout, moderately long, joint 2 not half the

length of 3; prothorax subquadrate, the sides feebly rounded anteriorly and almost straight behind, the hind angles not prominent, the base grooved within, the disc with a shallow oblique depression on each side behind the middle, a shallower transverse depression in front of this, and a fine median ridge, the surface very closely and somewhat finely punctured; elytra comparatively short, parallel, densely and moderately finely punctured, and with two fine distinct costæ on the disc and one at the sides, the inner one abbreviated before the apex, the suture also raised; beneath closely punctured and pubescent, piceous-brown, the venter a little lighter, the flanks of the prothorax bright violaceous; legs moderately slender, brownish, the penultimate joint of the tarsi tomentose beneath.

Length 5½ millim. (♀.)

Hab. PANAMA, Bugaba 1000 feet (*Champion*).

Two examples, both females. Broader than *S. viridipennis*; the antennæ very much stouter; the thorax subquadrate and with the hind angles not prominent, less finely punctured, more opaque, rosy-red, with the basal margin in the middle and the flanks violaceous; the elytra piceous-brown with a faint brassy (not greenish) lustre, and the first costa extending far beyond the middle; the legs a little stouter.

2. *Antennæ with joints* 3–5 *a little thickened in the female, subfiliform or slightly tapering in the male; eyes feebly emarginate; elytra with fine costæ. Species Lyciform.*

15. **Sisenes lineatocollis.** (Tab. VI. fig. 19, ♀.)

Moderately elongate, finely pubescent, subopaque; the head bronze or dark bronze, the sides of the front testaceous, the labrum piceous or black; the prothorax orange-yellow, with a longitudinal dark bronzy, violaceous, or brownish stripe down the middle; the elytra piceous or black with a brassy, violaceous, or greenish lustre, sometimes of a testaceous colour at the extreme base, in one example testaceous with the sides and apical half indeterminately piceous-brown. Head about as broad as the prothorax, very closely and rather coarsely punctured, the eyes small; antennæ black, stout, moderately long—subfiliform in the male, tapering a little outwardly and with joints 3–5 the stoutest in the female,—joint 2 very short; prothorax subquadrate, widest at the middle, the sides very slightly rounded anteriorly and almost straight behind, the hind angles not prominent, the base deeply grooved within and with prominent margin, the disc with a deep transverse depression on each side in front, a still deeper oblique depression on each side behind the middle, and a very prominent median ridge, the surface very closely and finely punctured; elytra moderately long, parallel, densely and moderately finely punctured, and with two distinct costæ on the disc and one at the sides, the inner one extending to about the middle and the others nearly reaching the apex, the suture also raised; beneath closely and finely punctured and pubescent, æneo-piceous, the flanks of the prothorax more or less stained with bright bronze or violaceous; legs slender, variable in colour—piceous or piceo-testaceous with the basal half of the femora usually testaceous, the penultimate joint of the tarsi tomentose beneath.

♂. Fifth ventral segment broadly and feebly emarginate; the sixth with the lateral lobes short.

Length 4½–7 millim. (♂ ♀.)

Hab. MEXICO, Tapachula in Chiapas (*Höge*); GUATEMALA, Rio Naranjo, El Reposo, Zapote (*Champion*).

Two examples from Mexico and seven from Guatemala, all but one from the lower part of the Pacific slope. As in several of the allied forms, the elytra vary a good deal in colour. The intermediate joints of the antennæ of the female are thicker than in the male. The dark stripe down the disc, the prominent median ridge, on either

side of which are two deep depressions, and the subquadrate form of the thorax distinguish this species from all others of the genus. In one of the Mexican examples the elytra have the basal half indeterminately testaceous.

A female specimen from El Reposo is figured.

16. **Sisenes eximius.** (Tab. VI. figg. 20, ♀, var.; 21, ♂.)

Moderately elongate, thickly pubescent, opaque; the head blackish- or greenish-bronze, the sides of the front and mandibles flavous, the tips of the latter, the epistoma, and labrum piceous; the prothorax orange or ochraceous, with a blackish-æneous or blackish-violaceous stripe on each side of the disc; the scutellum ochraceous; the elytra variable in colour—usually bluish-black or very dark violaceous with the basal half or more of the sides broadly, and the suture for a very short distance below the scutellum, ochraceous, or, more rarely, ochraceous with a narrow oblique dark violaceous stripe on each elytron running from the base to a little below the scutellum, the stripes here becoming confluent and continued narrowly down the suture to about the middle. Head a little broader than the prothorax in the male, densely and finely punctured, often shallowly grooved along the middle, the eyes rather small; antennæ black, stout, moderately long, tapering outwardly, joints 3–5 the stoutest in both sexes, but more distinctly so in the female, joint 2 very short; prothorax subquadrate, the sides slightly rounded in front and almost straight behind, the hind angles not prominent, the base grooved within, the disc with a rather deep oblique depression on each side behind the middle, a shallow transverse depression on either side in front of this, and a more or less distinct fine median ridge, the surface densely and finely punctured; elytra rather short, subparallel in the male, broader and widest beyond the middle in the female, densely and finely punctured, and with two fine costæ on the disc and one at the sides, the inner one extending to about the middle and the others nearly to the apex, the suture also raised; beneath finely and closely punctured and pubescent, piceous, with an æneous lustre; legs slender, black or brownish, the penultimate joint of the tarsi tomentose beneath.

♂. Fifth ventral segment very feebly emarginate; the sixth with the lateral lobes short and clothed with long hairs.

Length $4\frac{2}{3}$–$6\frac{1}{3}$ millim. (♂ ♀.)

Hab. Panama, Bugaba, Volcan de Chiriqui, David (*Champion*).

Numerous examples, the majority of them being females. This little species is allied to *S. dilaticornis*, from which it may be distinguished by its smaller size and much shorter and differently-coloured elytra, and also by the less dilated intermediate joints of the antennæ in the female. As in the allied forms, the male seems to be much rarer than the female.

We figure a typical male and a variety of the female, both from Bugaba.

3. *Antennæ with joints* 3–5 *much thickened in both sexes* (*at least in* S. lyciformis *and* S. mimetes); *eyes feebly emarginate; elytra with fine costæ. Species Lyciform.*

17. **Sisenes dilaticornis.** (Tab. VI. fig. 22, ♀.)

Moderately elongate, thickly pubescent, opaque, ochraceous, the head (except in the middle behind and at the sides in front) bronze, the prothorax with a piceous stripe on each side of the disc, the stripe sometimes continued on to the base of the elytra. Head as wide as the prothorax, very closely and finely punctured, the labrum and the tips of the mandibles piceous, the eyes small; antennæ (♀) black or fusco-ferruginous, moderately long, stout, with the joints from the third somewhat flattened, tapering outwardly and with joints 3–5 broader than the others, joint 2 short; prothorax subquadrate, the sides a little rounded in front and almost straight behind, the hind angles not prominent, the base grooved within, the disc with

two rather deep oblique depressions on each side, one behind and one before the middle, and a more or less distinct median ridge, the surface densely and finely punctured; elytra moderately long, rather broad, widest beyond the middle, densely and finely punctured, and with two fine sharp costæ on the disc and one at the sides, the inner one becoming obsolete at about one-third from the apex and the two outer ones confluent behind, the suture also distinctly raised; beneath closely and finely punctured and pubescent, piceous, the venter and prothorax sometimes brown; legs piceous or brown, the penultimate joint of the tarsi tomentose beneath.

Length 7–7½ millim. (♀.)

Hab. Nicaragua, Chontales (*Belt*, *Janson*).

Four examples.

18. **Sisenes suturalis.** (Tab. VI. fig. 23, ♀.)

Elongate, thickly pubescent, very opaque, ochraceous, with the space between the points of insertion of the antennæ and the sides of the head, the labrum, the tips of the mandibles, the sides of the prothorax in front, and the suture of the elytra very narrowly to beyond the middle, piceous-black. Head as wide as the prothorax, densely and finely punctured, the eyes rather small; antennæ (♀) black, moderately long, very stout, tapering outwardly and with joints 3–5 much thicker than the others, joint 2 short; prothorax distinctly longer than broad, the sides very feebly rounded before the middle, a little constricted behind, and shallowly emarginate in front immediately before the apex, the front and hind angles slightly prominent, the base grooved within, the disc with a large oblique rather deep depression on each side just behind the middle and very shallowly transversely depressed on either side in front of this, the surface densely and finely punctured; elytra very long, subparallel, densely and rather finely punctured, and with two prominent costæ on the disc and one at the sides, the inner one not reaching the apex and the two outer ones confluent behind, the suture also distinctly raised; beneath closely and finely punctured and pubescent, entirely piceous; legs rather slender, brownish-black, the penultimate joint of the tarsi tomentose beneath.

Length 9 millim. (♀.)

Hab. Mexico, Cerro de Plumas (*Höge*).

One example. The much more elongate shape, larger size, differently-formed antennæ, &c. distinguish this insect at once from *S. dilaticornis*.

19. **Sisenes lyciformis.** (Tab. VI. figg. 24, ♂; 24 *a*, labium; 24 *b*, maxilla and maxillary palpi; 24 *c*, œdeagus.)

Elongate, the head and prothorax sparsely, the elytra thickly, pubescent, opaque; the prothorax and the basal half of the head coppery- or crimson-red, the anterior portion of the latter bronze or obscure violaceous, and the sides of the front and the mandibles pale flavous, the labrum and palpi piceous; the elytra black, blackish-brown, or brown, often with a violaceous or coppery tint in certain lights, the shoulders (or the sides for some distance), and sometimes the extreme base or a longitudinal space on either side of the suture in front, brownish-yellow. Head about as wide as the prothorax in the female, broader in the male, densely and rather coarsely punctured, the eyes small; antennæ black, rather long, tapering outwardly, joint 2 short, joints 3–5 very much stouter than the others in both sexes but much stouter in the female than in the male, the following joints comparatively slender; prothorax subquadrate, the sides slightly rounded before the middle and feebly sinuate behind, the hind angles rather (and sometimes the front angles slightly) prominent, the base grooved within, the disc with a large deep oblique depression on each side behind the middle, shallowly transversely depressed in front, and with an interrupted more or less distinct median ridge, the surface coarsely, closely, and roughly punctured, the punctuation much coarser and rougher than that of the head; elytra long, a little flattened on the disc, narrow and more parallel in the male, broader and widening to beyond the middle in the female, the surface very densely

punctured, and with two fine rather sharp costæ on the disc and one at the sides, the inner one not reaching the apex, the suture also distinctly raised, the apices obtuse and divergent; beneath closely and finely punctured and pubescent, rather shining, piceous or piceous-brown with an æneous lustre, the sides of the meso- and metasternum more or less violaceous, the head and prothorax brilliantly so, the epipleuræ coppery or violaceous; legs slender, black or brownish, the coxæ pale testaceous, the penultimate joint of the tarsi tomentose beneath.

♂. Fifth ventral segment rather deeply emarginate; the sixth with the lateral lobes projecting considerably beyond the fifth and hairy at the apex.

Length 7–9⅓ millim. (♂ ♀.)

Hab. GUATEMALA, Purula, Sabo, and Sinanja in Vera Paz (*Champion*).

Found in profusion by myself in the humid forest-region of the Atlantic slope at elevations of from 1500 to 4000 feet. The insect superficially resembles *Calleros sinanjæ*, Gorh., a species of Lycidæ inhabiting the same district, and, like it, is found resting upon leaves in the moist forest. The thorax is much more coarsely and more roughly punctured than the head and is of a uniform crimson- or coppery-red colour. The elytra in certain lights appear purplish or violaceous, and their colour is obscured by the brownish pubescence. A female example is figured.

20. **Sisenes mimetes.** (Tab. VI. fig. 25, ♀.)

Allied to *S. lyciformis*, and differing as follows:—The head closely and rather coarsely punctured, with the sides piceous, dark bronze, or blackish-violaceous, a longitudinal space in the middle behind (narrowing anteriorly and becoming broader towards the base) reddish or flavous; the prothorax yellowish- or brick-red, with the sides in front narrowly violaceous, the surface densely and rather coarsely punctured; the elytra black, blackish-violaceous, or blackish-brown, with the sides to about the middle (very broadly at the base and rapidly becoming more narrowly so) ochraceous; the rest as in *S. lyciformis*.

Length 6½–9 millim. (♂ ♀.)

Hab. MEXICO, Cordova (*Sallé*), Jalapa (*Höge*).

Five examples. The very much finer and less rough punctuation of the thorax and the differently-coloured upper surface distinguish this species at a glance from *S. lyciformis*, with which it agrees closely in size, shape, and sculpture. The antennæ have joints 3–5 very much thickened. This species, like many others of widely different families, bears a remarkable resemblance to certain Lycidæ inhabiting the same districts, a similar system of coloration and general facies—and, to a certain extent, form of antennæ—existing in various Central-American Longicornia, Hispidæ, Galerucidæ, Lagriidæ, and Meloidæ.

21. **Sisenes personatus.** (Tab. VI. fig. 26, ♀.)

Elongate, thickly pubescent, opaque; the head black, a narrow longitudinal space down the middle behind ochraceous, the sides of the front and the mandibles (the tips excepted) flavous, the labrum black; the prothorax black, with a broad longitudinal band down the middle, and the sides narrowly at the base, ochraceous; the scutellum ochraceous; the elytra black, with a short lateral stripe at the base (starting from the shoulder and gradually narrowing behind) ochraceous. Head about as wide as the prothorax, densely and rather finely punctured, the eyes small; antennæ (♀) black, rather long, tapering outwardly, joint 2 very short, joints 3–5 very much stouter than the others; prothorax comparatively large, broader than long, the sides a little rounded anteriorly and very slightly sinuate behind, the hind angles some-

what prominent, the disc with two large deep oblique grooves on each side and traces of a median ridge, the base grooved within and with prominent margin, the surface densely and finely punctured; elytra (♀) long, flattened on the disc, widening to far beyond the middle, the surface very densely punctured, each elytron with four fine costæ (the first not reaching the apex, the second and fourth confluent immediately before the apex and enclosing the third, the latter short, much less distinct, and in a line with the shoulder), the suture also raised, the apices obtuse and divergent; beneath very finely and closely punctured and pubescent, black with an æneous lustre, the flanks of the prothorax bright violaceous; legs black, comparatively stout, the penultimate joint of the tarsi tomentose beneath.

Length 9½ millim. (♀.)

Hab. NICARAGUA, Chontales (*Janson*).

One specimen only of this very distinct species has been received. Larger and broader than the corresponding sex of *S. mimetes*; the thorax broader than long, and with two deep oblique grooves on each side of the disc; the elytra with an additional costa on each; the upper surface differently coloured. Specimens of a closely allied species from the Amazons are contained in Mr. F. Bates's collection *.

VODOMARUS.

Last joint of the maxillary palpi oblong-ovate, narrow, the apex obliquely truncate, that of the labial palpi oblong-ovate; mandibles deeply cleft at the apex; mentum strongly transverse; head moderately produced in front; eyes entire (the inner edge not sinuate or emarginate), oblong-oval, lateral, very finely granulated, moderately large; antennæ slender, filiform, moderately long, 11-jointed,—1 and 3 about equal in length, 2 not quite half the length of 3, 3 and the following joints subequal; prothorax transverse; elytra moderately long, very gradually narrowing from the base, without raised or impressed lines on the disc, completely covering the wings, the apices obtuse and somewhat divergent; legs slender, the femora not dilated in the male; tibial spurs short; claws sharply toothed within near the base.

A single species from Central America is referred to this genus. *Vodomarus* approaches the Old-World genus *Œdemera*, but differs from it in the oblong-ovate and shorter apical joint of the maxillary palpi, less subulate elytra, less elongate antennæ, the first and third joints of which are about equal in length, and toothed claws. The oblong-oval and entire eyes, toothed claws, and more attenuate elytra distinguish it from *Sisenes*.

1. **Vodomarus quadrifoveolatus.** (Tab. VII. figg. 1, 1 *a*, labium; 1 *b*, maxilla and maxillary palpus.)

Elongate, finely and rather thickly pubescent, shining; the head flavous or flavo-testaceous, the base broadly

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* **Sisenes scutellaris.**

Smaller, narrower, and more parallel than *S. personatus*; black or blackish-violaceous, the head in the middle behind and in front, the prothorax with the sides narrowly (in one example at the base only) and a broad stripe down the middle, the scutellum, the elytra with the suture for a short distance and in one example the sides from the base nearly to the middle (but narrowly so behind), orange-yellow; antennæ (♀) black more slender than in *S. personatus*, joints 3–5 stouter than the others; elytra with two fine sharp costæ on the disc and one at the sides (without trace of a third costa between the outer one on the disc and the one at the sides); legs rather slender; the rest as in *S. personatus*.

Length 6½ millim. (♀.)

Hab. AMAZONS, Pará, Ega (*H. W. Bates*). Two examples.

marked with piceous in the middle, the labrum, eyes, antennæ, and tips of the mandibles piceous; the prothorax flavous, with a median vitta (narrowing a little behind and not quite reaching the base) and the sides very narrowly (the piceous marking on the flanks just visible from above) piceous; the elytra piceous, each with a rather broad pale flavous vitta on the disc near the suture. Head very finely and thickly punctured; prothorax rather convex, transverse, not so wide as the head, scarcely narrower at the apex than at the base, the sides a little sinuate behind and feebly rounded, the disc with a long deep oblique depression on either side behind the middle (the depressions separated from each other by a median ridge), a transverse depression on each side in front, and a deep transverse one in the centre at the base, the basal and apical margins raised, the former grooved within and slightly emarginate in the middle, the surface very finely and closely punctured; elytra a little flattened on the disc, longitudinally grooved at the base near the shoulders, and with a sharp carina below the latter running parallel with the lateral margin nearly to the apex, the suture also sharply raised, the surface very finely and closely punctured; beneath densely punctured, piceous, the prothorax (except the flanks) and the venter (except the hind margins and sides of the segments) more or less flavous or testaceous; legs flavous or testaceous, the tibiæ and tarsi and the tips of the four hinder femora brownish or piceous.

Length 4–4½ millim. (♂.)

Hab. Mexico (*Sallé*); Guatemala, Sinanja in Vera Paz (*Champion*); Panama, Bugaba (*Champion*).

One example only from each locality. The specimen from Bugaba is immature and has the head and thorax flavous, the elytral vitta much broader, and the depressions on the thorax shallow. The elytra do not exhibit the slightest trace of impressed or raised lines on the disc, though the suture is sharply raised and there is a sharp carina running along the side close to the lateral margin.

COPIDITA.

Copidita, Leconte, New Species Col. p. 164 (1866).

Numerous species from Central America are provisionally referred to *Copidita*. They chiefly differ from the type of the genus, *C. quadrimaculata* (Motsch.), from Sitkha and California, a male example of which is contained in the British Museum, in having comparatively shorter elytra and less elongate antennæ, and the fifth ventral segment unemarginate laterally in the male; and from *Oxacis* in the bifid mandibles. The form of the head, eyes, and thorax is similar to that of *Oxacis*; the eyes, as in the type, are coarsely granulated (in one species, *C. nigripennis*, they are much more finely granulated); the penultimate joint of the tarsi (as in the type) is spongy-tomentose beneath; the claws are feebly dilated at the base; the antennæ have eleven joints in both sexes, the eleventh constricted or emarginate at the middle, the first about as long as the third. Numerous undescribed species from Tropical South America, the Antilles, Tahiti, &c. are, no doubt, congeneric with those from Central America; but of the various species from the Antilles referred to *Copidita* by Mr. C. O. Waterhouse, probably one only, *C. lateralis*, having bifid mandibles, really belongs to it as here understood.

1. *Eyes coarsely granulated, moderately large.*

* *Last joint of the maxillary palpi cultriform or subcultriform.*

1. Copidita panamensis. (Tab. VII. fig. 2.)

Very elongate, opaque, brownish-yellow or yellowish-brown, thickly clothed with rather coarse yellowish pubescence. Head densely and finely punctured, more sparsely so in front, the eyes and the tips of the mandibles black or piceous, the eyes comparatively small; antennæ testaceous, joints 1 and 3 about equal in length, 11 strongly constricted a little beyond the middle; prothorax longer than broad, the sides rounded anteriorly and converging behind, the disc broadly concave in front, largely depressed in the middle behind, and with a large oblique depression (shallow in one example, deeper in the other) on either side anteriorly extending to the anterior angles, the anterior margin considerably raised, the surface densely and finely punctured (a rather broad longitudinal space on the middle of the disc impunctate in one example); elytra long, broadest beyond the middle, closely and more coarsely punctured than the prothorax, and with three distinct feebly raised lines on the disc and one at the sides extending nearly to the apex, the suture also raised; beneath testaceous, densely punctured; legs testaceous, the extreme apices of the femora piceous.

Length 11–11½ millim. (♀.)

Hab. PANAMA, Bugaba (*Champion*).

Two examples. This is a comparatively large species, brownish-yellow in colour, with the tips of the femora darker; the thorax is broadly concave in front and depressed on either side of the disc before the middle; the elytra have three raised lines on the disc and the suture also raised. The apical joint of the maxillary palpi is long and subcultriform, and the mandibles are bifid. *C. panamensis* is not very closely allied to any other species here noticed from Central America; but an allied undescribed one from Venezuela is known to me, and the following comes near it.

2. Copidita scabrosa.

Moderately elongate, opaque, brown, thickly clothed with rather coarse pubescence. Head very closely and somewhat coarsely punctured, the eyes and the tips of the mandibles piceous, the eyes rather small; antennæ testaceous, rather stout, joint 1 about as long as 3 (11 missing); prothorax longer than broad, the sides strongly rounded anteriorly, slightly emarginate in front just before the rather prominent anterior angles, and rapidly converging behind, the disc broadly concave in front, flattened in the middle behind, and largely and deeply depressed on either side before the middle, the anterior margin considerably raised and with a triangular prolongation on the inner side in the centre, the surface densely and subrugulosely punctured; elytra comparatively short, rather more coarsely and more rugulosely punctured than the prothorax, with three raised lines or costæ on the disc and one at the sides, the suture also raised, the latter and the costæ accompanied on either side by a faint fuscous line; beneath testaceous, densely punctured; legs rather stout, testaceous, the extreme apices of the femora a little darker.

Length 6½ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

One example. Very much smaller and less elongate than *C. panamensis*; the thorax and elytra densely and subrugulosely punctured, the latter less opaque, more convex, relatively shorter, and with the raised lines on the disc more distinct. In the dense

and rough punctuation of the thorax and elytra and the rather prominent raised lines on the latter this species differs from all others of the genus here recorded. The raised anterior margin of the thorax is triangularly prolonged inwards at the middle. The last joint of the maxillary palpi is elongate and subcultriform. The dense punctuation of the thorax and elytra, that of the thorax much finer, differently formed palpi, bifid mandibles, and other particulars distinguish it from *Oxacis pilosa*.

3. **Copidita trifoveata.** (Tab. VII. fig. 3, ♂.)

Elongate, thickly clothed with rather coarse yellowish pubescence; the head and prothorax slightly shining, orange-yellow; the elytra opaque, flavo-testaceous. Head closely and finely punctured, the eyes and the tips of the mandibles black, the eyes coarsely granulated and feebly emarginate; antennæ fusco-testaceous, the basal joints piceous-brown, very long, slender, joints 1 and 3 equal in length, 11 constricted a little beyond the middle; prothorax much longer than broad, the sides rounded anteriorly, strongly constricted at the middle, and thence to the base rapidly converging, the disc transversely concave in front, with a large **U**-shaped depression in the middle behind, a very large and deep oblique depression on either side anteriorly, and a fine median ridge towards the apex, the apical and basal margins raised, the hind angles rather prominent, the surface very closely and finely punctured, the punctures rather coarser on the disc; elytra thickly, shallowly, and finely punctured, and with two raised lines or costæ on the disc extending from the base nearly to the apex; beneath pale flavo-testaceous, densely and finely punctured; legs slender, flavous, the tips of the femora and the tibiæ and tarsi piceous-brown.

Length 9 millim. (♂.)

Hab. NICARAGUA, Chontales (*Belt*).

One example only. In this species the thorax is long, much narrowed behind, and has three deep depressions, and its basal and apical margins are raised; the elytra have two distinct raised lines on the disc; the apical joint of the maxillary palpi is subcultriform; and the mandibles are bifid.

4. **Copidita maculicollis.** (Tab. VII. fig. 4, ♂.)

Elongate, thickly clothed with rather coarse pubescence; the head and prothorax slightly shining, testaceous or flavo-testaceous, the former broadly infuscate between the eyes, the latter with the anterior half marked with piceous or brown (this colour surrounding two or three flavous spots on each side of the disc and divided along the middle by an extension of the ground-colour, sometimes extending along the lateral margin and on either side of the disc to the base); the elytra opaque, brownish-testaceous or brown. Head finely and thickly (in some specimens more coarsely) punctured, the eyes and the tips of the mandibles black, the eyes coarsely granulated, the oral organs testaceous or fusco-testaceous; last joint of the maxillary palpi long and cultriform, much longer in the male than in the female; antennæ long and slender, testaceous with the outer half of each joint (the first excepted) fuscous or piceous, or fuscous with the extreme base of each joint testaceous, joints 1 and 3 equal in length, 3 twice as long as 2, 11 constricted at the middle in both sexes; prothorax longer than broad, the sides rounded anteriorly, feebly sinuate or emarginate just before the apex, constricted at the middle, and thence to the base converging, the disc depressed in the centre before the base and with a large and deep depression on each side before the middle, the basal and apical margins raised, the surface very closely and finely (in some specimens very densely) punctured, a narrow space along the middle of the disc smoother in some examples; elytra densely and finely punctured, and with three raised lines on the disc and one at the sides, the suture also raised; beneath densely punctured, testaceous; legs testaceous, the apices of the femora fuscous or piceous, the tibiæ and tarsi sometimes brownish.

Length 7½–9 millim. (♂ ♀.)

Hab. GUATEMALA, Volcan de Atitlan, Pantaleon (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

Var. α. Smaller (6 millim.) and less elongate; the head and prothorax more coarsely, the latter also more densely, punctured; above and beneath and the legs and antennæ testaceous, the raised lines and suture of the elytra paler.

Hab. GUATEMALA, Mirandilla (*Champion*).

One male example.

Var. β. The head narrowly infuscate between the eyes; the prothorax with a large piceous-brown patch on each side before the middle, the elytra brown with the suture flavo-testaceous.

Hab. PANAMA, Bugaba (*Champion*).

One female example.

Var. γ. Larger (10 millim.); the head and prothorax flavo-testaceous, the latter with an angulated brownish marking on each side of the disc anteriorly; the elytra piceous-brown, and with the raised lines less distinct.

Hab. MEXICO, Santecomapan (*Sallé*). Pic's var. mexicana

One example.

This is a widely distributed and variable species. The description is taken from the numerous specimens from the Volcan de Atitlan. In well-marked examples the dark patch on each side of the thorax in front assumes the form of an eye-like spot, and there is often a spot in front of this and another one external to it; in some specimens the thorax is fuscous, with a central vitta and three spots placed one below the other on each side (the hinder one much the largest) flavous or testaceous. The last joint of the maxillary palpi is long and cultriform, and much longer in the male than in the female; the mandibles are bifid. In some examples the suture and the raised lines on the elytra have an interrupted faint fuscous line on either side, this line formed by a series of very shallow longitudinal impressions which are fuscous within. Our figure is taken from a typical male example from Pantaleon.

5. **Copidita palpalis.**

Closely allied to *C. maculicollis* and differing thus: the head infuscate between and behind the eyes; the prothorax with the sides very broadly, and a narrow median vitta towards the base (the vitta confluent on each side with the lateral marking in one example), infuscate; the elytra as shining as the prothorax, with a series of shallow oblong fuscous impressions along the suture and on each side of the raised lines; the last joint of the maxillary palpi very elongate and cultriform in the male.

Length $8\frac{1}{4}$–9 millim. (♂.)

Hab. GUATEMALA, Capetillo (*Champion*).

Two examples. This insect is very closely allied to *C. maculicollis*, but it can scarcely be treated as a variety of that species. The apical joint of the maxillary

palpi in the male is very long and cultriform, if anything longer than in the same sex of *C. maculicollis*, and the mandibles are bifid.

** *Last joint of the maxillary palpi shorter, subtriangular.*

6. **Copidita apicalis.** (Tab. VII. fig. 5.)

Elongate, narrow, thickly clothed with rather coarse pubescence; the head and prothorax rather shining, the former testaceous with a broad longitudinal infuscate stripe on the middle of the vertex, and the anterior half and the greater part of the mandibles pale flavous, the latter reddish-testaceous; the elytra opaque, fuscous, the suture rather broadly throughout, the lateral margin narrowly (but not visibly so from above), and a transverse fascia (extending completely across) just before the apex, very pale flavous, the base and the apex of a darker fuscous tint. Head rather broad, very closely and moderately finely punctured, the eyes and the tips of the mandibles black; palpi fusco-testaceous, the last joint of the maxillary pair elongate-triangular and with its apical side a little longer than the inner side; antennæ fuscous, filiform, joints 1 and 3 about equal in length, 11 constricted at the middle; prothorax narrower than the head, the sides rounded anteriorly, constricted at the middle, and thence to the base subparallel, the disc a little flattened in the centre at the base and with a rather large depression on each side before the middle and a smooth central line, the surface very closely and moderately finely punctured; elytra densely and much more coarsely punctured than the prothorax, and with two fine raised lines on the disc; beneath densely punctured, piceous, the prothorax testaceous with the flanks darker towards the apex; legs pale flavous, the apical half of all the tibiæ piceous-brown, the tarsi partly, and the femora towards the apex, infuscate.

Length 5 millim.

Hab. Panama, Bugaba (*Champion*).

This small narrow species differs from all the allied forms in the coloration of the elytra. One specimen only was obtained, apparently a male.

7. **Copidita parvula.** (Tab. VII. fig. 6.)

Elongate, narrow, finely pubescent, opaque; the head flavous, with a Y-shaped median stripe and the sides behind the eyes brown or piceous; the prothorax flavous, with a broad median stripe, widening behind, and the sides narrowly (but not visibly so from above in one example), piceous; the elytra piceous or piceous-brown, the suture sometimes a little lighter. Head densely and finely punctured, the eyes and the tips of the mandibles black, the former large and coarsely granulated; antennæ black or piceous, rather stout, tapering outwardly, joint 1 a little longer than 3, 11 constricted at the middle; prothorax longer than broad, narrower than the head, the sides rounded anteriorly, constricted at the middle, and thence to the base subparallel, the disc shallowly depressed in the middle behind and with a shallow oblique depression on each side anteriorly, the surface densely and finely punctured; elytra densely and very much more coarsely punctured than the prothorax, and with three fine raised lines on the disc, the suture also a little raised; beneath densely punctured, piceous or fuscous, the prothorax (the flanks excepted) lighter; legs testaceous or flavous, the apices of the femora and the tibiæ (except at the base) piceous or brownish.

Length $3\frac{3}{4}$–$4\frac{1}{2}$ millim.

Hab. Panama, Bugaba, San Feliz (*Champion*).

Three examples, apparently females. Smaller and narrower than *C. apicalis*, the head and thorax opaque and more densely and more finely punctured, the latter with a broad median vitta, the elytra differently coloured, &c.; the apical joint of the

maxillary palpi is broad and similarly shaped. The antennæ taper outwardly, joints 1–5 being stouter than the others. *C. parvula* somewhat resembles *Sisenes lineatocollis*, from which it may be at once distinguished by the coarsely granulated and larger eyes, broad apical joint of the maxillary palpi, posteriorly constricted thorax, shorter head, &c.

2. *Eyes finely granulated, small; last joint of the maxillary palpi subtriangular.*

8. **Copidita nigripennis.** (Tab. VII. fig. 7.)

Elongate, narrow, opaque, thickly clothed with rather coarse ashy pubescence; the head (the basal part of the mandibles excepted) black; the prothorax reddish-yellow, slightly stained with piceous at the base in front of the scutellum; the elytra bluish-black. Head densely and very finely punctured, the eyes rather small and finely granulated; antennæ piceous, the two basal joints fusco-testaceous, stout, rather short, joints 1 and 3 about equal in length and comparatively short, 1 very stout, 2 half the length of 3, 11 strongly constricted at the middle; prothorax convex, much longer than broad, the sides moderately rounded anteriorly and gradually converging behind, the disc canaliculate in the centre at the base and with a very shallow oblique depression on either side before the middle, the surface densely and very finely punctured; elytra comparatively short, very obtuse behind, the surface scabrous and with indistinct traces of very fine raised lines; beneath densely punctured, piceous or black, the prothorax reddish-yellow; legs thickly pubescent; rather stout, piceous, the tibiæ and coxæ fusco-testaceous.

Length $6\frac{1}{2}$–7 millim.

Hab. Mexico (*Sallé*).

Three examples, all in a bad state of preservation, apparently females. This species, which is not labelled with any more exact locality, closely resembles a Chilian insect described by Fairmaire under the name of *Nacerdes brevipennis*; from which it differs in the head and thorax being more finely punctured, the latter more convex, with the impressions shallower and the median ridge obsolete; the antennæ shorter and stouter, and with a very stout basal joint; the elytra more scabrous and unicolorous. The last joint of the maxillary palpi is stout and elongate-triangular, with its inner side much shorter than the apical side; the mandibles are bifid. In all three examples the ashy pubescence of the elytra is more dense along the suture and at the sides, but this is probably due to abrasion.

OXACIS.

Oxacis, Leconte, New Species Col. p. 165 (April 1866); Leconte & Horn, Class. Col. N. Am. p. 405 (1883).

Probosca, Leconte, New Species Col. p. 166 (nec Schmidt, Lacordaire).

Hypasclera, Kirsch, Berl. ent. Zeitschr. xxx. p. 210 (July 1866).

This will probably prove to be the most widely distributed genus of the Œdemeridæ; and, as understood here, it contains a large number of species from the warmer parts of the Old and New Worlds, the Antilles, various Oceanic islands (Sandwich Is., Tahiti), Fiji, New Caledonia, &c.; it is, however, absent from Europe. The only species hitherto

referred to it are from North America, Colombia, or the Antilles; but very many of those included in *Ananca* by various authors undoubtedly belong to it. The last-named genus was not characterized by its authors: of the five species enumerated as belonging to it, all of which are from Chili, one only is known to me, *A. servillei* (Sol.), and this is not congeneric with the Central and North-American species of *Oxacis*; *A. servillei* agrees with *Oxacis* in the simple form of the mandibles (*cf.* Solier, in Gay's Hist. fis. y polit. de Chile, Zool. v. Atlas, t. 21. fig. 4 bis *d*), but differs in its longer head and more depressed and more oblong eyes. The species here referred to *Oxacis* agree in having the mandibles entire at the apex *; the antennæ 11-jointed, with the apical joint usually constricted or emarginate at or beyond the middle, in both sexes; the eyes coarsely granulated (except in *O. dugesi*), very widely separated, oblique, and not prominent, usually large, and, at most, feebly sinuate or emarginate on their inner edge; the last joint of the maxillary palpi varying from subcultriform to subtriangular; the thorax oblong-cordate, always narrower at the base than at the apex; the anterior tibiæ with two spurs; the tarsi (except in *O. variegata*) with the penultimate joint only spongy-tomentose beneath; the claws toothed or angularly dilated, or, usually, only feebly dilated, at the base; the fifth ventral segment unemarginate in both sexes. Of the ten species from North America included by Leconte and Horn in *Oxacis*, examples of seven of which are before me, two at least, *O. notoxoides* and *O. thoracica* (Fabr.), have bifid mandibles, and these do not belong to the genus as here understood; the former is apparently referable to *Ditylus* and the latter to *Copidita*. *Hypasclera*, Kirsch, based upon three species from Colombia, is, no doubt, congeneric with *Oxacis*; and of the numerous species of *Copidita* from the Antilles described by Mr. C. O. Waterhouse (*cf.* Trans. Ent. Soc. London, 1878, pp. 306–309) all but one, *C. lateralis*, probably belong to the same genus, these having, apparently, the mandibles entire at the apex. In two of the species from Central America the posterior femora are much thickened in the male; this character, however, as in *Œdemera*, is not of generic importance.

Various species from North and Central America, chiefly those frequenting the sea-shore, have the claws toothed within at the base; but as there are numerous others with the claws angularly or subangularly dilated, and many in which the dilatation is very feeble, this character cannot be regarded as of generic value; the two species from North America with toothed claws were supposed by Leconte to belong to *Probosca*.

Numerous species of *Oxacis* are found only on or near the sea-shore, others in inland localities.

Posterior femora incrassate in the male; eyes coarsely granulated; last joint of the maxillary palpi subcultriform and with the apical side longer than the inner side; tarsi with the penultimate joint tomentose beneath; claws angularly or feebly dilated at the base . . . . . Species 1, 2.

* This cannot always be accurately ascertained without opening them; the right mandible (as noticed by Leconte) has in some species a short tooth on the upper inner side, but distant from the apex.

Posterior femora slender and similar in both sexes.
Tarsi with the penultimate joint only tomentose beneath.
Eyes coarsely granulated, usually large.
Claws toothed or angularly dilated at the base; last joint of the maxillary palpi subcultriform, or with the apical and inner sides about equal in length . . . . . Species 3–9.
Claws simple or at most feebly dilated at the base.
Last joint of the maxillary palpi more or less subcultriform and with the apical side usually the longest . . . Species 10–22.
Last joint of the maxillary palpi more triangular and with the apical side not longer than the inner side . . . . Species 23, 24.
Eyes finely granulated, small; last joint of the maxillary palpi subtriangular . . . . . Species 25.
Tarsi with the joints preceding the penultimate one tomentose beneath; eyes coarsely granulated; claws simple . . . . . Species 26.

1. **Oxacis femoralis.** (Tab. VII. fig. 8, ♂.)

Elongate, opaque, thickly clothed with short ashy pubescence; testaceous or pallid testaceous, the prothorax with a median stripe, and sometimes the sides very narrowly at the middle, and the elytra with a narrow stripe near the suture and a broader one at the sides, confluent just before the apex, brownish or piceous. Head closely and finely punctured, the eyes and the tips of the mandibles black; antennæ testaceous, the eleventh joint scarcely emarginate; prothorax longer than broad, the sides strongly rounded anteriorly and gradually converging behind, the disc depressed in the middle before the base and with a large shallow depression on either side anteriorly, the surface densely and finely punctured; elytra subparallel, finely, densely, and shallowly punctured, and sometimes with traces of one or two raised lines on the disc, the apices very obtuse; beneath densely and finely punctured, testaceous, the last three ventral segments and the metasternum sometimes stained with piceous; legs testaceous, the claws angularly dilated at the base.
♂. Posterior femora strongly incrassate; the posterior tibiæ stout, a little curved, and with the inner apical angle produced into a blunt tooth.
Length 7–9½ millim. (♂ ♀.)

Hab. Mexico, Juquila (*Sallé*), Morelia in Michoacan (*Höge*).

Five examples, including both sexes from each locality. This and the following species may be known from all others of the genus by the much thickened posterior femora of the male. The female of *O. femoralis* closely resembles *O. lucana* (Lec.), but differs in the more finely punctured thorax, more parallel shape, and less sharply toothed claws. *O. femoralis* is apparently confined to inland localities. Labelled *Ananca variabilis*, Chevr., in the Sallé collection.

2. **Oxacis podagrica.**

Elongate, subopaque, thickly clothed with short ashy pubescence; pallid testaceous, the prothorax with a median stripe, and the elytra with a narrow stripe near the suture and another at the sides, confluent before the apex, brownish or fuscous. Head closely and finely punctured, the eyes and the tips of the mandibles black; antennæ testaceous; prothorax longer than broad, the sides strongly rounded anteriorly and gradually converging behind, the disc depressed in the middle before the base and with a large shallow depression on either side anteriorly, the surface closely and rather coarsely punctured; elytra broadest just below the base and thence very gradually narrowing to the apex, the apices very obtuse, closely and

very finely punctured, and sometimes with traces of one or two raised lines on the disc; beneath closely and finely punctured, pallid testaceous, the last three ventral segments often darker; legs testaceous, the claws feebly dilated at the base.

♂. Posterior femora strongly incrassate (not quite so stout in one example); the posterior tibiæ a little curved.

Length 7–9 millim. (♂ ♀.)

Hab. GUATEMALA, San José (*Champion*); PANAMA, near the city (*Champion*).

Four male and two female examples, all from the Pacific coast; one only from Panama. This insect was found in both localities in company with *O. litoralis*. It differs from the latter in the finer punctuation of the head, the less close and shallower punctuation of the thorax, and the differently marked elytra; the claws are only feebly dilated at the base, and the posterior femora in the male are much thickened. From *O. femoralis*, the much coarser and sparser punctuation of the head and thorax and the less closely punctured elytra sufficiently distinguish it; the male of the present species has the inner apical angle of the hind tibiæ armed with a very short tooth.

(Paroxacis)

3. **Oxacis lucana.**

Probosca lucana, Lec. New Species Col. p. 167 [1].

Hab. NORTH AMERICA, Cape San Lucas, Lower California [1].—MEXICO, Tres Marias Is. (*Forrer*).

A single female example received from the Tres Marias Is. agrees exactly with one of the same sex from Cape San Lucas forwarded to us by Dr. Horn. The species appears to be confined to the sea-shore.

Alloxacis

4. **Oxacis holosericea.** (Tab. VII. fig. 9.)

Elongate, opaque, densely clothed with very fine silky cinereous pubescence; testaceous or pallid testaceous, the prothorax with the sides rather broadly and a median stripe (the latter somewhat interrupted at the middle), and the elytra with two broad vittæ which are confluent just before the apex (leaving only the suture, the lateral margin, and a discoidal stripe of the pallid ground-colour, the discoidal stripe indistinct in one example), brownish or piceous. Head very closely and finely punctured, the eyes and the tips of the mandibles black; antennæ testaceous, the basal joints sometimes slightly stained with piceous, the eleventh joint constricted at the middle in both sexes; prothorax longer than broad, convex, the sides a little rounded in front and gradually converging behind, the disc longitudinally depressed in the centre before the base (canaliculate in the middle in one example) and with a very shallow indistinct depression on either side anteriorly, the surface densely and minutely punctured; elytra subparallel, punctured like the prothorax, and without distinct raised lines; beneath densely and minutely punctured, pallid testaceous, the flanks of the prothorax, the sides of the metasternum, and (sometimes) the sides of the venter stained with piceous; legs testaceous, the knees sometimes a little darker, the femora similar in both sexes, the claws very distinctly toothed at the base.

Length 6½–8 millim. (♂ ♀.)

Hab. MEXICO, Acapulco (*Höge*), Tres Marias Is. (*Forrer*).

One male and two female examples. This species resembles *O. lucana* (Lec.), but is at once to be distinguished from it and the allied forms by the dense and minute

punctuation of the thorax and elytra, the latter with very dense fine silky pubescence. The claws are toothed at the base as in *O. lucana*. The right mandible is armed on the inner upper side near the tip with a small tooth, as in *O. dorsalis*, Lec. In one example the vittæ of the elytra are only separated by a narrow indistinct stripe.

In the National Collection there is an example of a species very closely allied to this, but differing from it in having simple claws; it is from Pensacola and may be referable to *O. tæniata*, Lec.

(Paroxacis)

5. **Oxacis mandibularis.** (Tab. VII. fig. 10, ♀.)

Elongate, opaque, clothed with very fine short ashy pubescence; the head and prothorax pale testaceous, the latter with a large patch on the middle of the disc, and the sides at the middle narrowly, infuscate; the elytra fuscous, with a discoidal stripe (starting from the middle of the base and gradually narrowing) and the suture testaceous. Head deeply sunk into the prothorax, finely and rather thickly punctured, sparsely so in front, the epistoma smooth, the eyes and the apical portion of the mandibles black, the latter largely developed (when closed, projecting far beyond the sides and apex of the labrum) and simple; antennæ testaceous, joint 3 about as long as 1, 11 very feebly emarginate at the middle; prothorax about as long as broad, broader than the head, the sides rounded in front and converging from a little before the apex to the base, the disc flattened in the middle behind, and with a large oblique depression on each side anteriorly and traces of a smooth central line, the surface densely and finely punctured; elytra punctured like the prothorax and without raised lines; beneath testaceous, densely and finely punctured; legs testaceous, the claws toothed at the base.

Length 7½ millim. (♀.)

Hab. Mexico, Presidio (*Forrer*).

One example only of this distinct species was obtained. Closely allied to *O. lucana* and *O. holosericea*; but differing from these in the more largely developed mandibles and in having the head more deeply sunk into the thorax (much as in the European genus *Probosca*), the latter wider in front and broadest just before the apex. The punctuation of the thorax and elytra is much finer than in *O. lucana*, but a little coarser and less dense than in *O. holosericea*. The right mandible is not toothed on the inner upper side near the tip. The head is more deeply sunk into the thorax than in any of the allied forms. The last joint of the maxillary palpi is triangular, its inner and apical sides about equal in length.

Alloxacis

6. **Oxacis pleuralis.**

Probosca pleuralis, Lec. New Species Col. p. 166[1].

Hab. North America, Florida[1].—Mexico (*coll. F. Bates*), Vera Cruz (*Höge*).

This species, according to the description, would appear to be allied to *O. dorsalis*; but to differ from it in the toothed claws, and in the elytra having only a submarginal fuscous vitta. Three examples collected by Herr Höge at Vera Cruz and another from Mexico in Mr. F. Bates's collection differ thus from *O. dorsalis*, and they are very probably conspecific with *Probosca pleuralis*, Lec. These Mexican specimens may also be distinguished from *O. dorsalis* by having the eleventh joint of the antennæ unemarginate,

and the thorax and elytra less densely and much more coarsely punctured. The punctuation of the thorax is close and a little finer than in *O. litoralis*; the three examples are without trace of a median vitta on the thorax and of any marking near the suture of the elytra.

(Parodacis)

7. **Oxacis litoralis.** (Tab. VII. fig. 11, ♀.)

Elongate, opaque, somewhat thickly clothed with short ashy pubescence; pallid testaceous or testaceous, the head often infuscate between the eyes, the prothorax with the sides and a median stripe of variable width (the latter often obsolete), and the elytra with a broad lateral stripe and sometimes a very short stripe on either side of the suture at the base (the latter frequently obsolete), piceous or brown. Head coarsely and closely punctured, the eyes and the tips of the mandibles black, the antennæ testaceous or fusco-testaceous; prothorax longer than broad, the sides arcuate in front and gradually converging behind, the disc with a shallow depression on each side anteriorly and transversely depressed in the middle before the base, the surface coarsely and closely punctured; elytra thickly and finely punctured, and usually with traces of one or two slightly raised lines on the disc; beneath densely and very finely punctured, pallid testaceous, the last two or three ventral segments sometimes darker; legs testaceous, the femora similar in both sexes, the claws toothed at the base.

Length 5–11 millim. (♂ ♀.)

Hab. Mexico, Acapulco (*Höge*); Guatemala, Champerico and San José (*Champion*); Nicaragua (*Sallé*); Panama, near the city (*Champion*).

Found in profusion by myself on the sea-shore at Champerico and San José, on the Pacific coast of Guatemala. *O. litoralis* is closely allied to *O. lucana* (Lec.), but differs from it in the sparser and much coarser punctuation of the head and thorax. It varies exceedingly in size, and the male is usually (but not always) very much smaller than the female; in about half the specimens the short stripe on the elytra on either side of the suture at the base is obsolete. The apical joint of the antennæ is unemarginate in both sexes. A fully-coloured female example from Acapulco is shown on the Plate.

(Parodacis)

8. **Oxacis limbata.**

Elongate, subopaque, thickly clothed with rather coarse ashy pubescence; testaceous, the prothorax with a median stripe and (except in one example) the sides at the middle more or less piceous, the elytra æneo-piceous with the suture rather broadly and the lateral margin very narrowly pallid testaceous. Head closely and rather coarsely punctured, the eyes and the tips of the mandibles black or brown, the vertex darker in the middle in one example; antennæ testaceous, with the second and third joints infuscate; prothorax longer than broad, the sides moderately rounded anteriorly and gradually converging behind, the disc depressed in the middle before the base and with a shallow depression on either side anteriorly, the surface densely and rather coarsely punctured, the punctures coarser and less close along the middle of the disc, the latter with traces of a smooth raised line in one example; elytra parallel to about the middle and gradually narrowing beyond, closely and moderately finely punctured, and with one or two fine raised lines on the disc; beneath very closely and finely punctured, testaceous, the venter more or less stained with piceous; legs testaceous, the claws toothed at the base.

Length 6½–8 millim. (♂ ♀.)

Hab. Mexico, Juquila (*Sallé*), Chilpancingo (*Höge*).

Three examples. This species is closely allied to *O. litoralis*, from which it may be known, apart from the difference in the markings of the elytra, by the denser punc-

tuation of the thorax and the coarser punctuation of the elytra. The elytra are æneo-piceous, with a greenish-æneous lustre in certain lights, and have only a narrow space along either side of the suture and the extreme lateral margin testaceous.

9. **Oxacis dorsalis.**

Nacerda dorsalis, Melsh. Proc. Ac. Phil. iii. p. 55 [1].
Asclera dorsalis, Lec. Proc. Ac. Phil. vii. p. 21 [2].
Oxacis dorsalis, Lec. New Species Col. pp. 165, 166 [3].
Xanthochroa vittatus, Hald. Journ. Ac. Phil. ser. 2, i. p. 96 [4].

Hab. North America, Carolina [1 2], New Orleans [4], Texas [2].—Mexico (*coll. F. Bates*), Vera Cruz (*Höge*).

Found in abundance by Herr Höge on the sea-shore at Vera Cruz. The Mexican specimens agree perfectly with others before me from Texas. The eleventh joint of the antennæ is constricted at the middle in both sexes *; the right mandible is armed on the inner upper edge near the tip with a small tooth; the claws are angularly dilated at the base; the thorax is densely and finely punctured; and the elytra have each two brown or fuscous longitudinal vittæ which are confluent just before the apex, the vittæ being always distinct. These characters are all present in the Texan examples. According to Leconte [3], the claws are only very slightly dilated at the base in his genus *Oxacis*.

10. **Oxacis teapensis.** (Tab. VII. fig. 12, ♀.)

Elongate, opaque, thickly pubescent; the head testaceous at the sides and in front, for the rest brownish or piceous, the eyes and the tips of the mandibles black, the palpi piceous; the prothorax pale yellowish-testaceous, with the sides and a large ovate patch on the middle of the disc brown or castaneous; the elytra brownish or fuscous, with the suture very narrowly and the lateral margin rather more broadly pale testaceous. Head densely and finely punctured; antennæ (♀) rather short, piceous, the two basal joints and the three or four outer ones lighter, the eleventh strongly constricted at the middle; prothorax a little longer than broad, rather convex, the sides strongly rounded anteriorly, constricted at the middle, and gradually converging behind, the apex emarginate in the centre and shallowly grooved within at a little distance from the rather prominent margin, the anterior angles slightly projecting, the disc transversely depressed in the middle before the base and with traces of a smooth slightly raised central line, the surface densely and finely punctured at the sides and more coarsely so on the disc; elytra rather broad, densely, shallowly, and finely punctured, the apices very obtuse; beneath densely and finely punctured, piceous, with the prothorax (and sometimes part of the venter) testaceous; legs (including the coxæ) testaceous, with the apices of the tibiæ and the tarsi piceous-brown, the entire tibiæ piceous in one example, the claws simple.

Length 8–8½ millim. (♀.)

Hab. Mexico, Teapa in Tabasco (*Höge, H. H. Smith*).

Two examples, apparently both females. Except for a slight difference in the colour

* The antennæ are described by Melsheimer as having "two short terminal joints, both together about as long as the tenth, in the male."

of the legs and under surface, the two examples agree almost exactly with each other. The species is not very closely allied to any other here enumerated.

11. **Oxacis pictipennis.** (Tab. VII. fig. 13.)

Elongate, narrow, thickly and finely pubescent; the head and prothorax shining, flavo-testaceous; the elytra very opaque, luteous, each with a brownish-black spot at the middle of the base and a similarly-coloured longitudinal streak on the lateral margin just below the shoulder (not visible from above) and another on the middle of the disc. Head broad, finely and sparsely punctured, a longitudinal space in the middle between the eyes and the epistoma smooth, the tips of the mandibles, the last two joints of the maxillary palpi, and the eyes black; antennæ rather slender, extending to beyond the middle of the elytra, piceous, the basal joint fusco-testaceous, the third joint shorter than the first, the eleventh constricted at the middle; prothorax much longer than broad, the sides strongly rounded anteriorly, abruptly constricted at the middle, and thence to the base parallel, the disc feebly canaliculate in the middle behind, the surface finely and thickly punctured; elytra subparallel, densely and minutely punctured, and with two fine raised lines on the disc; beneath densely and finely punctured, entirely testaceous; legs testaceous, the tibiæ and tarsi piceous.

Length 8½ millim.

Hab. Guatemala, Teleman (*Champion*).

One specimen, apparently a male, captured by myself in the lower part of the Polochic Valley. The peculiar coloration and other particulars mentioned above distinguish this species at once from all the allied forms.

12. **Oxacis bilineata.** (Tab. VII. fig. 14, ♂.)

Elongate, thickly pubescent; the head and prothorax shining, pale flavo-testaceous; the elytra opaque, stramineous, each with a very narrow blackish-brown stripe along the lateral margin, extending from just below the shoulder nearly to the middle and not visible from above, and a similarly-coloured very narrow stripe on the disc, the latter extending three-fourths of the elytral length. Head finely and sparsely punctured at the sides and behind, smooth along the middle and in front, the eyes and the tips of the mandibles black, the apical joint of the maxillary palpi infuscate at the base; antennæ (♂) very long, extending far beyond the middle of the elytra, slender, testaceous, joints 2–4 a little darker, 3 shorter than 1, 11 constricted at the middle; prothorax much longer than broad, narrow, the sides moderately rounded anteriorly, constricted at the middle, and thence to the base almost parallel, the disc shallowly depressed in the middle behind and with a smooth median line, the surface closely and finely punctured; elytra subparallel, closely and minutely punctured and with one fine raised line on the disc (the usual second line obsolete); beneath densely and finely punctured, pallid testaceous, the metasternum a little darker; legs slender, pallid testaceous, the tibiæ and tarsi piceous-brown.

Length 7½ millim. (♂.)

Hab. Panama, Bugaba (*Champion*).

One example. This species is closely allied to *O. pictipennis*, from which its narrower head and thorax (the latter much less rounded at the sides anteriorly), more slender limbs, and different elytral markings sufficiently distinguish it. The apical joint of the maxillary palpi, as in *O. pictipennis*, is long and cultriform. The narrow lateral stripe of the elytra is completely invisible from above.

13. **Oxacis pilosa.** (Tab. VII. fig. 15.)

Elongate, slightly shining, testaceous or fusco-testaceous, thickly clothed with long coarse decumbent hairs. Head coarsely and closely punctured, the tips of the mandibles piceous, the eyes scarcely darker; antennæ

testaceous or fusco-testaceous, moderately stout, thickly pilose, joint 3 shorter than 1, 11 unemarginate; prothorax rather longer than broad, the sides moderately rounded anteriorly and gradually converging behind, the disc depressed in the middle before the base, and with a rather large depression on each side anteriorly, the base emarginate in the centre, the surface coarsely, closely, and irregularly punctured; elytra closely and rather coarsely punctured, and with two raised lines or costæ on the disc extending from the base nearly to the apex, the suture also a little raised; beneath testaceous or fusco-testaceous, closely punctured; legs rather stout, pilose, testaceous.

Length 7¾–9½ millim. (♂ ♀.)

Hab. Guatemala, San José (*Champion*).

Many examples of this species were found in rotten tree-stumps in the mangrove-swamps bordering the Pacific coast. The long coarse pubescence, hairy legs and antennæ, coarse punctuation, distinct raised lines or costæ on the elytra, and somewhat shining surface distinguish this species from all the allied forms. The last joint of the maxillary palpi has the inner and apical sides about equal in length.

(Oxacis)

14. **Oxacis tropicalis.**

Elongate, densely clothed with very fine silky pubescence; testaceous, the sides of the prothorax narrowly (from above only visibly so from the middle to the apex), of the elytra broadly, piceous. Head finely and somewhat thickly punctured, a space along the middle in front smoother, the eyes and the tips of the mandibles piceous; antennæ rather stout, fusco-testaceous, joints 1 and 2 lighter, 3 fully as long as 1, 11 emarginate at the middle; prothorax longer than broad, the sides feebly rounded anteriorly and gradually converging behind, the disc a little flattened in the middle before the base and slightly depressed on either side anteriorly, the surface densely and minutely punctured; elytra subparallel in their basal half, densely and minutely punctured, and with one or two raised lines on the disc, the piceous colour at the base occupying less, at the apex more, than half of the elytral width; beneath densely and minutely punctured, testaceous, the venter suffused with piceous; legs comparatively short and stout, entirely testaceous, the claws only slightly dilated at the base.

Length 6½–7½ millim. (♂ ♀.)

Hab. British Honduras (*Blancaneaux*); Honduras, Ruatan I., Bay of Honduras (*Gaumer*).

Two examples. This species is not very closely allied to any other here enumerated: the densely and very finely punctured surface, short silky pubescence, long thorax, short, rather stout legs, and almost simple claws, chiefly distinguish it. The above description is chiefly taken from the female specimen from Ruatan I.; the smaller, male, example is immature, and has the sides of the thorax and of the elytra barely darker than the rest of the surface. The apical joint of the maxillary palpi is subcultriform. *Copidita simplex*, Waterh., from St. Bartholomew I., is a closely allied species, and differs from *O. tropicalis* in having the thorax emarginate at the middle of the base, and entirely flavous, and the sides of the elytra very broadly marked with black; it apparently has the mandibles entire, as in *O. tropicalis*.

15. **Oxacis nitidicollis.** (Tab. VII. fig. 16, ♀.)

Elongate, clothed with rather coarse ashy pubescence; the head and prothorax shining, flavo- or reddish-testaceous; the scutellum testaceous; the elytra opaque, brownish-violaceous with the suture and two

narrow lines down the middle of the disc testaceous, or brownish-testaceous and with the lines indistinct. Head finely and rather closely punctured, the eyes and the tips of the mandibles piceous; antennæ piceous-brown, or testaceous with the apex of each joint darker, rather stout, joints 1–3 about equal in length, 11 constricted at the middle; prothorax longer than broad, the sides moderately rounded anteriorly and converging behind, the disc depressed in the middle before the base, and with a rather large rounded depression on each side anteriorly, the base slightly emarginate in the centre, the surface finely and closely punctured; elytra densely punctured, and with two slightly raised lines on the disc; beneath densely and finely punctured, testaceous or reddish-testaceous, the venter a little darker; legs piceous with the basal two-thirds of the femora testaceous, or testaceous with the tarsi and the apices of the femora and tibiæ piceous-brown.

Length $7\frac{1}{3}$–$8\frac{1}{3}$ millim. (♂ ♀.)

Hab. MEXICO, Oaxaca (*Höge*).

Two examples. This species is allied to *O. pallida*, Lec., but differs from it in the shining, less densely punctured, and unicolorous head and thorax, finer pubescence, &c. The above description, except as regards colour, is chiefly taken from the dark-coloured female example; the unique male appears to have the head and thorax abnormally formed, the latter being not so long as broad, and having the discoidal impressions deeper than in the female, and the former longitudinally grooved between the eyes.

16. **Oxacis angustata.**

Very elongate, narrow, finely pubescent; the head and prothorax slightly shining, piceous-brown, the former in front, at the base, and at the sides behind, and the latter with an indeterminate longitudinal space on either side of the disc, testaceous; the elytra opaque, piceous-brown, the suture a little lighter. Head densely and finely punctured, the eyes black; antennæ piceous-brown, very long in the male, much shorter in the female, joints 1–3 about equal in length, 11 constricted at the middle; prothorax longer than broad, the sides moderately rounded anteriorly and gradually converging behind, the disc depressed in the middle before the base and with a rather large but shallow oblique depression on each side anteriorly, the base and apex feebly emarginate in the centre, the surface densely and finely punctured; elytra very elongate, subparallel, densely and finely punctured, and with three raised lines on the disc; beneath piceous-brown, densely and finely punctured; legs piceous-brown, the basal two-thirds of the femora and the coxæ testaceous.

Length $8\frac{1}{2}$–10 millim. (♂ ♀.)

Hab. MEXICO, Tehuacan (*Höge*).

One female and three male examples. This is a very elongate, narrow, moderate-sized, obscurely-coloured species not very closely allied to any other here enumerated, except *O. variegata* and the following, *O. lineatula*. The more finely punctured surface, less opaque elytra, the lines on which are more distinctly raised, and different colour distinguish it from any of the varieties of *O. cana*. The apical joint of the maxillary palpi is cultriform, its apical side much longer than the inner side.

17. **Oxacis lineatula.** (Tab. VII. fig. 17, ♂.)

Elongate, narrow, finely pubescent, slightly shining; pale brown or brownish-testaceous, the head in the middle, the disc and sides of the prothorax, and the sides of the elytra broadly (and sometimes the suture on either side for a short distance below the scutellum), fuscous or piceous-brown. Head densely and finely punctured, the eyes and the tips of the mandibles black; antennæ brown or piceous-brown, with the two basal joints (and sometimes the extreme apex of the others) testaceous, very long in the male, shorter in

the female, joints 1 and 3 about equal in length, 11 constricted at the middle; prothorax longer than broad, the sides moderately rounded anteriorly and converging behind, the disc depressed in the middle before the base and with an oblique depression (very deep in some examples, quite shallow in others) on either side anteriorly, the base and apex slightly emarginate in the middle, the surface densely and finely punctured; elytra subparallel, very closely and finely punctured (the punctures quite separate from each other), with two raised lines on the disc and the suture also a little raised, the raised lines and the suture accompanied on either side by a more or less distinct row of very shallow, fine, oblong, fuscous impressions; beneath densely and finely punctured, testaceous, the sides and venter piceous-brown; legs testaceous, the tibiæ usually darker.

Length 5–8 millim. (♂ ♀.)

Hab. Mexico, Tehuacan (*Höge*).

Many examples. This is one of several species of which we have only received examples from Tehuacan in the State of Puebla. *O. lineatula* is closely allied to and resembles an abraded example of *O. angustata*; but differs in its smaller size, less elongate shape, and more shining, less densely punctured, and differently-coloured elytra. The raised lines and suture of the latter are accompanied on either side by fine fuscous lines, formed by serially arranged very shallow oblong fuscous impressions.

18. **Oxacis cana.** (Tab. VII. figg. 18, 19, ♂, vars.)

Asclera cana, Lec. Proc. Ac. Phil. vii. p. 225 [1].

Oxacis cana, Lec. New Species Col. p. 165.

Hab. North America, San Diego [1], Texas.—Mexico, Presidio (*Forrer*), Mazatlan, Acapulco, Chilpancingo, Iguala, Oaxaca (*Höge*), Cuernavaca, Guanajuato, Leon, Santecomapan, Vera Cruz (*Sallé*), Atoyac in Vera Cruz (*H. H. Smith*).

This is an exceedingly variable species in size and in the colour of the upper and under surfaces, legs, and antennæ; and some of its varieties are quite inseparable from the numerous Texan examples before me. *O. cana* may be known from the allied forms by its very elongate shape, finely and densely punctured head and thorax, densely scabrous-punctate elytra, and very fine short ashy pubescence. In fresh examples the pubescence on the front of the head and on each side of the disc of the thorax appears to be thicker, and has the appearance of being transversely or obliquely combed. The thorax usually has a median vitta, and the sides at the middle piceous or brownish (the median vitta being sometimes quite obsolete, and the lateral marking conspicuous), but is sometimes entirely testaceous; in some specimens there is a narrow smooth space or raised line on the middle of the disc and, rarely, a minute bare space at the inner limit of the lateral marking. The elytra are brownish or fuscous, sometimes with a violaceous tinge, with the suture, and often the lateral margin also, testaceous; in rare examples they are entirely testaceous.

The following varieties are connected with the typical form by numerous gradations:—

Var. a. The prothorax flavous, the median vitta and the lateral spot orange-red or reddish-brown, the former

broad and extending from the base to the apex; the elytra unicolorous fusco-piceous, or with the suture or lateral margin very narrowly lighter.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*). figured

Var. β. The prothorax with a very distinct smooth longitudinal median space and a bare impunctate spot on each side at the inner limit of the lateral marking.

Hab. MEXICO, Durango city (*Höge*), Etla, Yolos, Guanajuato (*Sallé*), Cuernavaca (*Sallé, Höge, H. H. Smith*), Chilpancingo (*Höge, H. H. Smith*), Oaxaca (*Sallé, Höge*); GUATEMALA, San Gerónimo (*Champion*).

Var. γ. The head and prothorax piceous, the elytra piceous-brown, the rest as in β.

Hab. MEXICO, Guanajuato (*Sallé*). Two examples only.

In the Sallé collection the typical form is labelled *Nacerdes chevrolati*, Dej.; the var. β, *Oxacis sericea*, Dugès; and the var. γ, *Oxacis concolor*, Dugès. The typical form and the var. β are about equally common in Mexico; the var. α was collected in some numbers at San Gerónimo, and one specimen of it has been received from Atoyac. The species is still more variable in Mexico and Guatemala than in the Southern United States. The antennæ have the eleventh joint very strongly constricted at the middle in both sexes (apparently, but not really, twelve-jointed), and the third joint about as long as the first. Our specimens vary in length from 5–10 millimetres. We figure a male example of the var. β, and another of the same sex of var. α, the former from Cuernavaca, and the latter from San Gerónimo.

19. **Oxacis plumbea.**

Very elongate, narrow, opaque, leaden-black (the elytra when denuded of pubescence with a violaceous tint in certain lights), thickly clothed with fine ashy pubescence. Head (including the epistoma and labrum) densely and finely punctured, the eyes not very coarsely granulated; antennæ black, the first joint rather longer than the third, the eleventh strongly constricted at the middle; prothorax convex, longer than broad, the sides rounded anteriorly, constricted at the middle, and thence to the base subparallel, the disc canaliculate behind, the base and apex with prominent margin and slightly emarginate in the centre, the surface densely, very finely, and uniformly punctured; elytra scabrous-punctate, and without distinct raised lines; beneath densely and finely punctured, piceous; legs piceous, the tibiæ a little lighter in one example.

Length 7½ millim.

Hab. MEXICO, Chilpancingo in Guerrero (*Höge*).

Two examples, apparently male and female. This insect is allied to, and of almost the same colour as, the var. γ of *O. cana*; but differs from it in the less coarsely granulated eyes and in the finer punctuation of the head and thorax, the pubescence on the latter still finer and less dense. The unicolorous plumbeous colour, elongate shape, and densely and very finely punctured surface distinguish this species from the other allied forms.

20. **Oxacis rugicollis.**

Elongate, opaque, thickly clothed with fine ashy pubescence; the head piceous; the prothorax piceous-brown, with the basal and apical margins fusco-testaceous; the elytra brownish, a little darker at the extreme base. Head densely and coarsely punctured, rugosely so in front; antennæ piceous, the basal joint rather longer than the third, the eleventh joint strongly constricted at the middle; prothorax longer than broad, convex, the sides much rounded anteriorly, constricted at the middle, and thence to the base converging, the disc very shallowly depressed on either side anteriorly, and with traces of a smooth median line at the base, the surface very densely and coarsely punctured; elytra scabrous-punctate, and with two feebly raised lines on the disc; beneath densely and finely punctured, piceous; legs testaceous, the apices of the femora and the tarsi piceous.

Length 7 millim. (♀.)

Hab. MEXICO, Ventanas in Durango (*Höge*).

One example. An obscurely-coloured species allied to *O. cana*, *O. plumbea*, &c.; but differing from these in the very dense and almost rugose punctuation of the head and thorax. The apical joint of the maxillary palpi is subcultriform. *O. fuliginosa*, Lec., from Cape San Lucas, to judge from the description, is somewhat allied to *O. rugicollis*; but differs from it in the more triangular apical joint of the maxillary palpi, finer punctuation, &c.

(Oxacis)

21. **Oxacis coahuilæ.**

Very elongate, opaque, thickly clothed with rather long, coarse, ashy pubescence; the head and prothorax testaceous or brownish-testaceous, the former usually with the middle of the vertex infuscate, the latter with a median vitta and the sides, more or less, fuscous or piceous; the elytra piceous-brown or piceous (with an æneous lustre when denuded of pubescence), with the suture, and sometimes the lateral margin also, pale flavous or pale testaceous. Head densely and finely punctured, the eyes and the tips of the mandibles black or piceous; antennæ testaceous or fusco-testaceous, joint 1 a little longer than 3, 11 constricted at the middle; prothorax convex, longer than broad, the sides moderately rounded anteriorly and gradually converging behind, the disc depressed in the middle before the base, the base very feebly emarginate in the centre, the surface densely, finely, and uniformly punctured, and sometimes with traces of a smooth median line; elytra densely and finely punctured, and with two raised lines on the disc; beneath densely and finely punctured, piceous-brown, the prothorax testaceous; legs testaceous, the tarsi sometimes a little darker.

Length 7–9 millim. (♂ ♀.)

Hab. MEXICO, Parras and Monclova in Coahuila (*Dr. Palmer*).

Found in abundance by Dr. Palmer in Northern Mexico. Of similar elongate shape to *O. cana*, but differing from that species in the coarser and longer pubescence, less scabrous elytra, more finely punctured thorax, the latter more gradually narrowed from the middle to the base, &c. In its coarse pubescence the present insect approaches *O. sericea*, Horn, from California, and *O. pallida*, Lec., from Texas. The last joint of the maxillary palpi is subcultriform, its inner side much shorter than its apical side.

22. **Oxacis trimaculata.** (Tab. VII. fig. 20.)

Elongate, opaque, thickly clothed with short fine ashy pubescence; the head and prothorax flavo- or reddish-

testaceous, the former with an oblong patch on the vertex (obsolete in one example), and the latter with a median vitta and a rather large spot on each side in front, black; the elytra brownish or fuscous, and usually with the suture very narrowly paler, the extreme base often stained with piceous. Head very closely and finely punctured, the epistoma, and often a narrow space along the middle, smoother, the tips of the mandibles, the eyes, and the palpi (usually) black; antennæ black, or black with the outer four or five joints testaceous, or testaceous with joints 1–3 piceous, the third joint the length of the first, the eleventh strongly constricted at the middle; prothorax convex, much longer than broad, the sides very strongly rounded anteriorly, abruptly constricted at the middle, and converging thence to the base, the disc depressed and canaliculate in the middle towards the base, and sometimes with a narrow smooth central space, and with a bare impunctate spot on either side at the lower inner limit of the lateral marking, the base feebly emarginate in the middle, the surface very closely and finely punctured; elytra scabrous-punctate, and sometimes with traces of one or two raised lines on the disc; beneath densely and finely punctured, piceous or piceous-brown, the prothorax testaceous; legs variable in colour—piceous with the basal half of the femora testaceous, or fusco-testaceous with the knees piceous.

Length 8–10 millim. (♂ ♀.)

Hab. Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*), Presidio (*Forrer*), Iguala and Chilpancingo in Guerrero, Oaxaca (*Höge*); Nicaragua, Chontales (*Belt*).

Eight examples from Mexico and one from Nicaragua, the latter agreeing perfectly with the others. Closely allied to and much resembling some of the varieties of *O. cana*; the thorax, however, is more regularly convex, more strongly rounded at the sides anteriorly, and has the lateral spot placed near the anterior angles, instead of at or near the middle as in *O. cana*. The thorax is similarly marked in all the examples before me, and the insect shows very little tendency to variation. An allied undescribed species from Venezuela is known to me. A specimen from Presidio is figured.

23. **Oxacis schistacea.** (Tab. VII. fig. 21.)

Hypasclera schistacea, Kirsch, Berl. ent. Zeitschr. 1866, p. 211[1].

Hab. Panama, Matachin (*Thième*).—Colombia, Bogota[1].

An example of a species of this genus captured by Dr. O. Thième in July 1877 along the line of the Panama railroad, and kindly given us by Dr. Sharp, agrees very nearly with the description of *Hypasclera schistacea*, Kirsch; it differs, however, in some minor details and in being smaller in size. The unicolorous pale blue colour (which is much obscured by the dense ashy pubescence) and testaceous legs distinguish this species from the other allied forms. It is perhaps advisable to give a description of the Panama insect:—

Elongate, narrow, subopaque, above and beneath pale cæruleous, densely clothed with fine ashy pubescence. Head densely and minutely punctured, the labrum and the greater part of the mandibles testaceous, the apices of the latter and the eyes black, the mandibles sharply pointed at the apex; palpi piceous, the last joint of the maxillary pair elongate-triangular and with its inner side rather longer than the apical side; antennæ (♂) very long, joint 1 about as long as 3, 11 strongly constricted at the middle, fusco-testaceous, the basal joint testaceous; prothorax much longer than broad, as wide as the head, rather convex, the sides a little rounded anteriorly and gradually converging from before the middle to the base, the disc canaliculate in the centre behind and with a shallow oblique depression on either side anteriorly, the surface densely and minutely punctured; elytra less densely punctured than the head and prothorax, and with

traces of two raised lines on the disc; beneath densely punctured; legs (including the coxæ) testaceous, the tarsi (the basal joint excepted) darker.

Length 5½ millim. (♂.)

24. **Oxacis minuta.**

Elongate, narrow, thickly clothed with rather coarse pubescence; the head and prothorax shining, the former piceous with the epistoma, labrum, and mandibles (except at the tip) testaceous, the latter reddish-testaceous with a narrow fuscous median vitta on the basal half of the disc; the elytra opaque, piceous, the suture from some distance below the base to beyond the middle flavous. Head very closely and finely punctured; palpi brownish-piceous, the last joint of the maxillary pair triangular and with its apical and inner sides about equal in length; antennæ (♀) rather short, piceous, joint 1 about as long as 3, 11 strongly constricted at the middle; prothorax convex, longer than broad, the sides moderately rounded anteriorly and converging behind, the usual depressions almost obsolete, the surface very closely and minutely punctured; elytra closely, shallowly, and much more coarsely punctured than the prothorax, and with shallow longitudinal grooves; beneath densely punctured, piceous, the prothorax testaceous; legs piceous-brown, the anterior and intermediate coxæ and the femora and tibiæ at the base testaceous.

Length 4½ millim. (♀.)

Hab. Mexico, Ventanas in Durango (*Höge*).

One example only. This is a very small and narrow species, with a convex, shining, reddish-testaceous thorax, and piceous head and elytra, the front of the former and the suture of the latter more or less flavous. It is not closely allied to any other here described.

25. **Oxacis dugesi.** (Tab. VII. fig. 22.)

Elongate, clothed with rather coarse ashy pubescence, black, the prothorax above and beneath reddish-yellow, the head and prothorax rather shining, the elytra opaque. Head very closely and moderately finely punctured, the eyes small and finely granulated; antennæ black, moderately long in the male, shorter in the female, joint 1 rather longer than 3, 11 a little constricted at the middle; prothorax a little longer than broad, the sides strongly rounded anteriorly, slightly emarginate immediately before the apex, abruptly constricted at the middle, and subparallel behind, the disc broadly depressed in the middle before the base and with a large and very deep depression on either side anteriorly, the basal and apical margins raised, slightly emarginate in the middle, and grooved within, the surface very closely and finely punctured, a narrow space along the middle of the disc impunctate; elytra densely and shallowly punctured, subscabrous, and with traces of two fine raised lines on the disc; beneath densely punctured, thickly pubescent; legs black, the claws simple.

Length 8 millim. (♂ ♀.)

Hab. Mexico, Guanajuato (*Sallé*), Morelia in Michoacan (*Höge*).

Two examples. In general facies this insect resembles certain somewhat similarly coloured species of *Asclera*, from which the simple claws and mandibles and other particulars sufficiently distinguish it. The last joint of the maxillary palpi is subtriangular, with its apical and inner sides about equal in length, and the inner angle somewhat rounded. The mandibles are not cleft at the apex. Labelled *Oxacis ruficollis*, Dugès, in the Sallé collection.

(Oxacis?)

26. **Oxacis variegata.** (Tab. VII. fig. 23.)

Very elongate, opaque; above blackish- or piceous-brown mottled with pale brown, very thickly clothed with coarse adpressed similarly-coloured pubescence, the entire surface densely and minutely punctured. Head uniformly punctured, the epistoma only smoother, the eyes and the outer part of the mandibles black or piceous, the eyes comparatively small; antennæ brown or piceous, very long in the male, shorter in the female, joint 1 rather longer than 3, 11 emarginate a little beyond the middle; prothorax much longer than broad, the sides rounded anteriorly, shallowly but distinctly emarginate just before the apex, and abruptly and rapidly converging from some distance before the middle, the disc longitudinally depressed in the centre behind, and with a rather large deep or shallow oblique depression on either side anteriorly (sometimes with traces of a fine smooth median line), the base broadly and feebly emarginate in the centre; elytra usually with traces of two raised lines on the disc; beneath a little paler than, and not quite so finely punctured as, above, densely clothed with coarse pubescence; legs brownish and thickly pubescent; tarsi with joints 1–4 of the front and intermediate pairs and 2 and 3 of the hind pair spongy-tomentose beneath, the claws simple.

Length 8½–14 millim. (♂ ♀.)

Hab. Mexico, Tehuacan in Puebla (*Höge*).

Found in abundance by Herr Höge. This very distinct species differs from all the allied forms in the colour and pubescence of the upper surface being variegate. The pubescence is so close as to hide the dense and minute punctuation. The thorax is rather abruptly dilated on each side before the middle, the dilated portion strongly rounded. The tarsi have not only the penultimate joint tomentose beneath, but also one or two of the joints preceding it. The mandibles are entire and rather broad at the apex. The last joint of the maxillary palpi is elongate, and has its inner and apical sides about equal in length, and the inner angle somewhat rounded. The species is allied to *O. angustata*, but differs from it in having an additional number of tarsal joints tomentose beneath and in the form of the maxillary palpi; it most certainly cannot be separated from it generically.

PIRAS.

Last joint of the maxillary palpi broad, ovate, with the apex very obliquely truncate, that of the labial palpi narrow, oblong ovate, with the apex abruptly rounded; mandibles entire at the apex, the right mandible only with a short tooth on the upper inner side towards the tip; mentum transverse; head prolonged into a broad beak in front, not very deeply sunk into, and narrower than, the prothorax; labrum large, subquadrate, and nearly as long as broad; eyes oblong, lateral, depressed, rather large, finely granulated, very slightly sinuate on their inner edge; antennæ inserted near the eyes, moderately long, 11-jointed, 1 longer than, 2 about one-third of the length of, 3, the following joints slightly decreasing in length, 11 sinuate at the middle; prothorax long and cylindrical; elytra about one-half broader than the prothorax, moderately long, parallel to beyond the middle, and narrowing thence to the apex, the apices rounded together; legs moderately slender, the femora not dilated in the male; tibiæ each with two long spurs; penultimate joint of the tarsi rather broadly lobed; claws toothed.

This genus includes two species from the Pacific coast—one from Mexico and one from Guatemala. *Piras* is allied to *Rhinoplatia* and *Probosca*, the former containing one representative in California, and the latter several species in the middle or south of Europe *. It differs from the former in the much less prolonged head and toothed

* The North-American species referred to this genus, as already noted, do not belong to it.

claws, and in the antennæ being inserted much nearer the eyes; and from the latter in its longer and more exserted head, more ovate, oblong, and less emarginate eyes, broad apical joint of the maxillary palpi, longer basal joint of the antennæ, and toothed claws. The species of all three genera appear to be chiefly found on the coast.

1. **Piras nasalis.** (Tab. VII. figg. 24, ♀; 24 *a*, labium; 24 *b*, maxilla and maxillary palpus.)

Elongate, moderately shining, thickly clothed with rather long appressed ashy pubescence; the head and prothorax dark bronze, the latter with a greenish or bluish lustre, the former with the mandibles (except at the tip) and the anterior part of the epistoma testaceous; the elytra metallic blue. Head very closely and finely punctured, the anterior part of the epistoma quite smooth, the palpi and antennæ piceous or piceous-brown; prothorax much longer than broad, cylindrical, as wide at the apex as at the base, the sides feebly sinuate behind the middle, the basal and apical margins prominent, the base feebly emarginate in the centre, the disc shallowly transversely depressed in the middle behind, and very shallowly obliquely depressed on each side anteriorly, the surface very closely and finely punctured, a narrow longitudinal space down the middle of the disc impunctate; elytra nearly two and a half times as long as the prothorax, densely, finely, and roughly punctured, and sometimes with indications of two fine raised lines on the disc; beneath bluish-black, the hind margins of the ventral segments sometimes paler, densely punctured; legs roughly punctured and thickly and coarsely pubescent, piceous or piceous-brown; fifth ventral segment unemarginate in both sexes; sixth ventral segment narrow, and with the lateral lobes slender, curved, and setose, in the male.

Length 6–7 millim. (♂ ♀.)

Hab. Guatemala, Champerico (*Champion*).

Four examples of this species were captured by myself on the sea-shore at Champerico.

2. **Piras bicolor.** (Tab. VII. fig. 25.)

Elongate, moderately shining, thickly clothed with ashy pubescence; the head blackish-bronze, the anterior part of the epistoma and the mandibles (except at the tip) flavous; the prothorax orange-yellow; the scutellum and elytra brassy-green. Head closely and finely punctured, the palpi and antennæ piceous; prothorax much longer than broad, cylindrical, as broad at the apex as at the base, the sides very feebly sinuate behind the middle, the disc feebly depressed in the centre before the base, and with the usual depression on either side anteriorly quite small and almost obsolete, the base feebly emarginate in the middle and with a rather prominent margin, the surface closely and finely punctured towards the sides and more sparsely so on the disc (the punctuation much more diffuse here than upon the head); elytra about three times as long as the prothorax, densely, finely, and roughly punctured, and with two fine raised lines on the disc; beneath dark greenish-bronze, the prothorax orange-yellow, densely punctured; legs (including the coxæ) testaceous, the tarsi and the apices of the tibiæ darker, finely punctured and pubescent.

Length 5½ millim.

Hab. Mexico, Mazatlan (*Höge*).

One example only. This species differs from *P. nasalis* in its very different colour; the head and thorax are narrower, and the legs are more finely pubescent and less roughly punctured.

Fam. XYLOPHILIDÆ.

We follow Thomson (Skand. Col. vi. p. 367) in referring *Xylophilus* and the genera formed at its expense to a separate family. The form of the abdomen and tarsi is very different from that of the Pedilidæ or Anthicidæ, with one or the other of which they are associated by most authors. The first and second ventral segments of the abdomen are connate and immovable, a character noticed by Thomson, but overlooked by other writers: Lacordaire, Mulsant and Rey, Jacquelin-Duval, and Leconte and Horn all include *Xylophilus* in groups stated to possess five (distinct or free) segments, exclusive of the short and sometimes visible sixth. The antepenultimate joint of the tarsi * is produced beneath into a long and rather broad lobe, which extends beneath the small penultimate joint to beyond the base of the apical one, the lobe itself being feebly emarginate at the apex †. These two characters, apart from others to be derived from the shape of the head, &c., at once distinguish this family from all others of the Heteromera ‡. Many authors place *Xylophilus* and *Scraptia* in the same group or family; but these genera are not closely allied, though they have the head very similarly formed.

XYLOPHILUS.

Xylophilus, Latreille, Fam. Nat. du Règne anim. p. 383 (1825) ; Lacordaire, Gen. Col. v. p. 584.
Aderus, Westwood, Zool. Journ. v. p. 57 (1829).
Euglenes, Westwood, Zool. Journ. v. p. 59 (1829).
Phytobænus, Sahlberg, Nov. Col. Fenn. p. 9 (1834).
Olotelus, Mulsant & Rey, Hist. Nat. Col. Fr., Colligères, p. 22 (1866).
Anidorus, Mulsant & Rey, loc. cit.

Sixty-two species of this genus have been described; of these, twenty-three are from Europe, five from Algeria, six from Japan, three from Ceylon, and sixteen from the United States of North America. No less than thirty-six are here recorded from Central America, and the genus will probably prove to be equally numerous in species in the northern parts of South America; no American species has hitherto been described from south of Texas or Florida. Of these thirty-six species, most of which are exceedingly distinct, and not at all closely allied, nearly two thirds (twenty-two) are represented by single examples only, and at least double this number must inhabit Central America.

Not a single representative of the genus is contained in either of the very extensive Mexican collections of M. Sallé or Herr Höge; and the only specimens of Mexican *Xylophili* we possess are a few recently captured by Mr. H. H. Smith. The general

* Mistaken for the penultimate by Lacordaire and Westwood.

† In our figures of *Xylophilus* the tarsi are represented as 4-, 4-, 3-jointed, the penultimate joint being too small to be shown.

‡ The Ægialitidæ, containing one genus only, *Ægialites*, is stated by Leconte and Horn to have the first and second ventral segments connate.

rarity of these insects is well known: they require special working for, and are not often obtained by chance collecting. So far as my own observations go, they are, in Central America, chiefly found in oak-woods, at elevations of from 3000 to 8000 feet; a considerable number of those collected by myself were beaten from the decaying branches of oaks. The numerous genera and subgenera that have been proposed by various authors are based solely upon European species, some of them upon single species only, and upon slight differences in the form of the antennæ or eyes. Three of these, *Phytobœnus*, *Euglenes*, and *Aderus*, have better claims than the others. These differences, however, are of specific rather than generic value. *Euglenes* and *Phytobœnus* are not represented in Central America, but are replaced by other groups or subgenera of equal value, of which *X. flabellatus* and *X. lacertosus* may be taken as typical examples. The eyes in the Central-American species vary greatly in size (sometimes reaching the base of the head, sometimes distant from it), in the extent of the emargination (from very deeply emarginate to entire), and in the amount of pilosity (from densely pubescent to apparently bare *). The antennæ also vary considerably: in the males of some species they are flabellate, or have a long apical joint; in others the intermediate joints are transverse in the female; one, *X. tantillus*, has the second and third joints very short and subequal. The hind femora are often incrassate or clavate in both sexes, sometimes incrassate in the male and slender in the female. The sexual distinctions existing in many species in the form of the tibiæ, femora, eyes, or antennæ are very remarkable; and in this respect *Xylophilus* is one of the most interesting genera of the whole of the Heteromera. The peculiar pouch-like excavation of the hind femora of the males of *X. fragilis*, *X. unifasciatus*, *X. sericeus*, and *X. bicolor*, and the excavate, ciliate, and broadly dilated hind femora of the males of *X. lacertosus*, *X. forticornis*, &c., are especially noteworthy.

In some of the Central- and North-American species the general shape is more elongate and Anthiciform, and in these the sexual distinctions are less marked. All are very fragile and difficult to obtain in perfect condition.

The earlier stages of many *Xylophili* are, no doubt, passed in rotten wood, especially in that of various species of oak.

The following table will assist in the identification of the Central-American species:—

Third antennal joint longer than the second (subequal in *X. humeralis*, *X. curvipes*, *X. flavitarsis*, and *X.* v-*notatus*), the two together much longer than the fourth.

Sides of the thorax not dilated in front nor compressed at the middle; eyes large or small, often larger and more approximate in the male (in some species occupying the whole of the side of the head, in

* Under the microscope short fine hairs are visible between the facets.

others the head extended behind them), more or less pubescent; sexual distinctions usually very pronounced.

Antennæ flabellate in the male; shorter, simple, and with the apical joint acuminate-ovate in the female . . . . . Species 1–6.

Antennæ stout, filiform or subfiliform, and with the apical joint elongate in the male; thickened outwardly, and with the apical joint ovate in the female.

Third antennal joint distinctly longer than the second . . . . . Species 7, 8.

Second and third antennal joints subequal, or the third very little longer than the second . . . . . Species 9–13.

Antennæ (except in *X. laticeps*) slender or moderately slender, and with the apical joint acuminate-ovate in both sexes, the apical joint usually a little longer in the male than in the female.

Upper surface shining, clothed with rather coarse, long, semierect pubescence; head broad; eyes large, moderately or narrowly separated . . . . . Species 14–21.

Upper surface shining, finely pubescent; head broad; eyes large, somewhat widely or narrowly separated . . . . . Species 22, 23.

Upper surface shining, finely pubescent; head rather narrow; eyes small, somewhat widely separated . . . . . Species 24.

Upper surface opaque or slightly shining, finely pubescent; head broad; eyes very widely separated . . . . . Species 25–28.

Upper surface opaque, pruinose; head broad; eyes large, narrowly separated . . . . . Species 29.

Antennæ (♂) with joints 1–3 rather slender, and 4–11 stout (4–10 flattened and subtriangular, longer than broad, 11 a little longer than 10); head broad; eyes large; thorax with four depressions, opaque; upper surface clothed with fine appressed pubescence; hind femora (♂) exceedingly stout . . . . . Species 30.

Sides of the thorax more or less dilated in front (very feebly so in *X. argentatus*) and compressed at the middle; eyes small in both sexes, finely granulated, distant from the base of the head, almost bare; upper surface opaque and densely clothed with fine appressed pubescence; sexual distinctions slight.

Body elongate and Anthiciform . . . . . Species 31–34.

Body short and broad . . . . . Species 35.

Second and third antennal joints very short, subequal, the two together shorter than the fourth . . . . . Species 36.

1. **Xylophilus flabellatus.** (Tab. VIII. fig. 1, ♂.)

Elongate, parallel, rather depressed; pitchy-black; the prothorax on all sides (narrowly) reddish-brown; the elytra with an irregular zigzag fascia before the middle (formed by an elongate Λ-shaped mark on the disc, and an oblique one near the suture) and a broad fascia before the apex, the latter nearly or quite enclosing an obliquely placed quadrangular patch of the ground-colour on each elytron near the suture (the anterior edge of the fascia angulate, the hinder edge straight), light castaneous or brownish-testaceous,

the suture very narrowly castaneous; the upper surface thickly clothed with rather long, somewhat coarse, decumbent pubescence, the pubescence variegate (yellowish on the light-coloured parts and darker elsewhere) and on the prothorax forming two irregular stripes on the disc and a marginal fringe at the sides behind (the hairs longer here and almost forming a tuft). Head large and broad, densely and roughly punctured; eyes (♂) hairy, very coarsely granulated, exceedingly large, occupying the whole of the lateral portion of the head (viewed from behind the head appears to be very narrowly and subangularly extended on either side beneath them), contiguous, very deeply emarginate; antennæ (♂) extending quite to the end of the elytra, rather slender, joint 1 stout, 2 transverse, stout, 3 nearly four times as long as 2, 4 about two-thirds the length of 3, 4–10 very gradually increasing in length, and each furnished on the inner side with an exceedingly long and slender ramus, 11 nearly two-and-a-half times as long as 10, thickening from the base to far beyond the middle, and then very abruptly constricted and slender to the apex, 4–10 in great part (the rami excepted) testaceous, the rest more or less piceous, all the joints (the rami included) thickly clothed with long fine hairs; prothorax moderately convex, much narrower than the head, about as long as broad, the sides converging from the middle, almost straight at the base, the disc obsoletely canaliculate, the surface very densely and finely punctured; elytra long, very much wider than the prothorax, parallel, flattened on the disc, and with a broad and rather deep oblique depression extending from the shoulders downwards towards the suture, the suture also depressed at the base, the surface rather shining, densely and coarsely punctured, the punctures finer at the extreme base; legs (including the tarsi) comparatively very elongate, the hind femora incrassate, piceous, the four anterior tibiæ beneath and the bases of the femora lighter, the tarsi and the knees (narrowly) testaceous or fusco-testaceous; the tibiæ almost straight, the hind pair only a little curved at the base, the front pair with a short tooth on the inner side at the apex.

Length 3½ millim. (♂.)

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Two male examples of this exceedingly distinct species were captured by Mr. Smith during his expedition to Western Mexico. *X. flabellatus* and the following five species belong to the same section of the genus as the North-American *X. melsheimeri*, Lec. The fringe of long hairs at the sides of the thorax behind extend to the shoulders of the elytra, and resemble, at first sight, acute hind angles. In this and the allied species the dark parts of the elytra are apparently almost bare; but when examined under a strong lens, the dark pubescence is easily seen. The eyes are clothed with short, fine erect hairs. The pattern of the elytra is different from that of *X. melsheimeri*.

2. **Xylophilus ramosus.**

Moderately elongate, parallel; head black; prothorax reddish-testaceous; elytra brownish-yellow, with an interrupted fascia just below the base, a longitudinal extension of which runs some distance down the suture, a broad, much interrupted fascia about the middle (formed by four partly confluent longitudinal streaks on each elytron), and a very narrow transverse streak near the suture some distance before the apex, piceous, the base and shoulders and the narrow dividing spaces of the median band brown; the pubescence long, that on the light parts ashy in tint. Head moderately large, densely and roughly punctured, and with a smooth central line on the vertex; eyes (♂) hairy, very large, moderately coarsely granulated, narrowly separated, very deeply emarginate; antennæ (♂) reaching to beyond the middle of the elytra, hairy, joint 3 nearly four times as long as 2, 4 barely half the length of 3, 4–10 gradually increasing in length, and each with an exceedingly long and slender ramus, 11 about three times as long as 10, much thickened beyond the middle, and then abruptly constricted and narrow to the apex, all the joints testaceous, 1, the apical half of 11, and the tips of the rami slightly infuscate; prothorax moderately convex, narrower than the head, about as long as broad, the sides converging from the middle, straight behind, the surface densely and finely punctured; elytra long, very much wider than the prothorax, parallel, a little flattened on the disc, and with a broad oblique depression extending from the shoulders downwards

towards the suture, the suture also depressed at the base, the surface slightly shining, densely and coarsely punctured, the punctures finer at the extreme base; legs long and slender, the hind femora incrassate, testaceous, the hind femora towards the apex and the hind tibiæ infuscate, the tarsi flavous.
Length 3 millim. (♂.)

Hab. GUATEMALA, Quiche Mountains 8000 feet (*Champion*).

One male example. Smaller and less elongate than *X. flabellatus*; the antennæ considerably shorter and much paler in colour; the head smaller; the eyes not so large, more finely granulated, and separated by a narrow space on the vertex (in *X. flabellatus* they are contiguous); the thorax and elytra differently coloured; the legs and palpi in great part testaceous.

3. **Xylophilus sticticus.** (Tab. VIII. fig. 2, ♂.)

Moderately elongate, parallel; head black; prothorax reddish-brown, the disc stained with piceous; elytra brownish-yellow, with an interrupted fascia immediately below the base, a longitudinal extension of which runs some distance down the suture, an angulated fascia a little below the middle (connected with basal one along the lateral margin and with three longitudinal branches extending upwards on the disc of each elytron), and a transverse streak near the suture some distance before the apex, piceous, the shoulders and the space in front of the basal fascia brown; the pubescence long, that on the light parts of the elytra ashy. Head large and broad, densely and roughly punctured; eyes (♂) hairy, very coarsely granulated, exceedingly large, occupying the whole of the lateral portion of the head (the head very narrowly extended behind them), contiguous, very deeply emarginate; antennæ (♂) reaching to beyond the middle of the elytra, hairy, entirely testaceous, joint 3 about three and a half times as long as 2, 4 not half the length of 3, 4–10 gradually increasing in length, and each with an exceedingly long and slender ramus, 11 about three times as long as 10, much thickened beyond the middle and then abruptly constricted and narrow to the apex; prothorax moderately convex, much narrower than the head, about as long as broad, the sides converging from the middle, straight behind, the surface densely and finely punctured; elytra moderately long, parallel, very much wider than the prothorax, a little flattened on the disc, and with an oblique depression extending from the shoulders downwards towards the suture, the suture also depressed at the base, the surface densely and coarsely punctured, the punctures finer at the extreme base; legs moderately long, the four anterior femora rather stout, the hind femora strongly incrassate, fusco-testaceous, the hind femora and tibiæ much stained with piceous, the anterior tibiæ with a short tooth on the inner side at the apex.
Length 3 millim. (♂.)

Hab. GUATEMALA, San Gerónimo (*Champion*).

One male example. Closely allied to *X. ramosus*, but differing from it in its less elongate shape, shorter and stouter legs, much broader head, and larger, more coarsely granulated, and contiguous eyes. The markings of the elytra and the form and colour of the antennæ are very similar in both species. The eyes are contiguous in the males of *X. flabellatus* and *X. sticticus*, distinctly separated in the same sex of *X. ramosus*.

4. **Xylophilus amulæ.** (Tab. VIII. fig. 3, ♀.)

Moderately elongate, parallel; head black; prothorax reddish-brown, the disc stained with piceous; elytra castaneous, with a small quadrangular patch on either side of the suture below the base, a short oblong patch a little below this on the outer portion of the disc, an elongate patch below and in a line with this, connected on its inner side with an elongate streak, and a common angulate fascia some distance before the apex (not reaching the lateral margin), black, a narrow, angulate, transverse space before and behind the anteapical fascia, an oblique space just below the first sublateral spot, and the shoulders (indetermi-

nately) brownish-yellow ; the pubescence long and variegate. Head moderately large, ensely and roughly punctured ; eyes (♀) clothed with short, erect, pubescence, coarsely granulated, large, occupying almost the whole of the side of the head (the head very narrowly extended on either side behind them), rather narrowly separated, very deeply emarginate ; antennæ (♀) testaceous, slightly infuscate at the base, about reaching to the basal third of the elytra, moderately stout, thickening a little outwardly, joint 2 short and globose, 3 more slender than, and nearly twice as long as, 2, 4–10 decreasing gradually in length, 9 and 10 as broad as long, 11 about twice as long as, and very much stouter than, 10, abruptly and obliquely constricted beyond the middle, and with the apical portion slender ; prothorax about as long as broad, not very convex, narrower than the head, the sides obliquely converging from the middle, straight behind, the surface densely and finely punctured ; elytra moderately long, parallel, rather broad, a little flattened on the disc, and with a rather deep oblique depression extending from the shoulders downwards towards the suture, the suture also depressed at the base, the surface slightly shining, densely and coarsely punctured ; legs (♀) moderately long, the hind femora incrassate, reddish-testaceous, the basal half of all the tibiæ and the hind femora beyond the middle piceous, the tarsi flavo-testaceous.

Length 2¾ millim. (♀.)

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

One female example. This elegant insect, the male of which doubtless has flabellate antennæ, is perhaps nearest allied to *X. ramosus*. The less coarsely granulated eyes distinguish it from *X. flabellatus* and *X. sticticus* ; the legs are formed as in the latter, but are less elongate than in the former. The pattern of the elytra is quite different from that of these three species, and the insect cannot possibly be the other sex of one of them.

5. **Xylophilus trifasciatus.** (Tab. VIII. fig. 4, ♂.)

Rather short, parallel ; head black ; prothorax piceous, with the base and apex narrowly reddish-brown, or reddish-brown and more or less suffused with piceous ; elytra brownish-testaceous, with two angulated fasciæ, one near the base and another below the middle, connected along the suture and at the sides, and a narrower subangulated fascia some distance before the apex, black or piceous—in some examples the fasciæ are broken up into spots, and do not reach the suture, in others the piceous colour is more extended ; the pubescence long, that on the elytral fasciæ ashy. Head large, densely and roughly punctured ; eyes hairy—in the male exceedingly large, occupying the whole of the lateral portion of the head (the head very narrowly extended behind them), very coarsely granulated, deeply emarginate —in the female smaller, separated by a space about equalling half the diameter of the eyes as seen from above, rather more finely granulated, and less deeply emarginate (the head a little more broadly extended on either side behind them) ; antennæ hairy—(♂) reaching to beyond the middle of the elytra, rather slender, joint 2 short and globose, 3 about three times as long as 2, 4 not half the length of 3, 4–10 very distinctly increasing in length, and each with an exceedingly long and slender ramus, 11 nearly three times as long as 10, much thickened beyond the middle, and then abruptly constricted and slender to the apex, 1 and 2, the rami in great part (the tip only of the lower one), and 11 (except at the base) piceous, the rest testaceous—(♀) reaching to about the basal fourth of the elytra, stouter, widening outwardly, joint 3 about twice as long as 2, 4 shorter than 3, 4–8 almost equal in length, 9 and 10 a little shorter, 11 twice as long as, and much stouter than, 10, very obliquely truncate at the apex, the apex pointed, 1 and 2 and 10 and 11 piceous or infuscate, the rest testaceous ; prothorax about as long as broad, not very convex, narrower than the head, the sides converging from the middle, straight behind, the surface densely and finely punctured ; elytra short, parallel, rather convex, with a shallow oblique depression extending from the shoulders downwards, the suture also depressed at the base, the surface densely and coarsely punctured ; legs moderately long, reddish- or fusco-testaceous, the four anterior femora darker outwardly, the hind femora and hind tibiæ more or less piceous, all the tarsi flavo-testaceous ; the hind femora strongly incrassate in the male, moderately so in the female.

Length 2–2½ millim. (♂ ♀.)

Hab. GUATEMALA, San Gerónimo (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 3000 feet, Boquete 3500 feet, David (*Champion*).

Numerous examples of both sexes, collected by myself at various elevations, from a little above the sea-level up to 3500 feet. The smaller size, the rather more convex and less elongate shape, the differently coloured antennæ, the third joint of which is relatively shorter in the male, and the different system of coloration of the elytra distinguish *X. trifasciatus* from *X. sticticus* or *X. ramosus*. The elytra vary a little in the markings, according to the predominance of the lighter or of the darker colour; in some specimens the fasciæ are broken up into spots; the apex in all is testaceous. Chiriqui examples do not differ from those from Vera Paz. Among the Central-American species with flabellate antennæ in the male, this seems to come nearest to the North-American *X. melsheimeri*, Lec., but to differ from it in its much smaller size, less elongate shape, and differently coloured antennæ.

6. **Xylophilus breviramus.** (Tab. VIII. figg. 5, ♂; 6, ♀.)

Of the same form and colour as *X. trifasciatus*; the elytra similarly marked, but with the extreme apex usually piceous. Head large, densely and roughly punctured; eyes very large and coarsely granulated (as in *X. trifasciatus*)—in the male narrowly separated (not contiguous), in the female divided by a space only twice the width of that of the male (this space narrower than that of the female of *X. trifasciatus*); antennæ—(♂) shorter than in *X. trifasciatus*, joint 2 short and globose, 3 three times as long as 2, 4 about half the length of 3, 4–10 subequal, and each with a comparatively short clubbed ramus (the longest only about equalling joints 7–9 united), 11 very stout, twice as long as 10, abruptly constricted beyond the middle, and then slender to the apex, 1, 10, and 11 and the tips of the outer rami piceous, the rest testaceous—(♀) much as in *X. trifasciatus*, joints 4–10 gradually decreasing in length and increasing in width, 1 and 9–11 (except the tip of the latter) piceous, the rest testaceous; prothorax, elytra, and legs as in *X. trifasciatus*; the hind femora strongly incrassate in both sexes.

Length 2–2½ millim. (♂ ♀.)

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Three male and two female examples. Very closely allied to *X. trifasciatus*, but easily distinguished from it in the male sex by the different proportions of the antennal joints, the rami of which are much shorter and more clubbed, and the less contiguous eyes. The female is only to be separated from the corresponding sex of *X. trifasciatus* by the rather more approximate eyes and the differently coloured antennæ. The antennal rami are shorter and more clubbed than in any of the preceding species. The extreme apices of the elytra are more or less infuscate in four examples, the fifth having the apices testaceous as in *X. trifasciatus*. While the eyes in the male are less contiguous than in *X. trifasciatus*, the reverse is the case in the female, the intraocular space being comparatively narrow in this sex of *X. breviramus*. Though apparently collected in company with *X. trifasciatus* in two localities, there can be no doubt of its specific distinctness.

7. **Xylophilus lacertosus.** (Tab. VIII. figg. 7, ♂; 7 *a*, hind leg.)

Moderately elongate, subparallel, broad, very robust, opaque, very densely clothed with rather long, semierect pubescence; the head and prothorax black or brownish-black, the former more or less ferruginous in front, and the latter, in one example, indeterminately lighter at the sides; the elytra reddish- or piceous-brown, or piceous with the base and shoulders brownish, with a rather broad, blackish stripe on either side of the suture extending from the base to far beyond the middle, this stripe limited posteriorly by a common triangular, ashy-pubescent, fusco-testaceous subapical patch, from which a line of ashy pubescence runs up the suture, and another (but interruptedly) along the outer edge of the sutural stripe, a similar streak of ashy pubescence extending from the shoulders downwards, and more or less confluent with the triangular patch. Head large and broad, very densely and roughly punctured; eyes very hairy, moderately large, narrowly separated in the male, more distant in the female, coarsely granulated, deeply emarginate, the head in both sexes somewhat broadly extended on either side behind them and rounded externally; antennæ ferruginous, the apical joint usually darker, very hairy, in both sexes exceedingly stout from the base—(♂) very long, widening a little outwardly, joint 2 more than half the length of, and a little stouter than, 3, 3–8 much longer than broad, subequal, 9 and 10 a little shorter, 10 as broad as long, 11 fully three and a half times as long as 10, slightly curved—(♀) shorter, more widened outwardly, the apical joint ovate, nearly twice as long as the tenth; prothorax narrower than the head, rather convex, as long as broad (a little longer in the male than in the female), the sides rounded and narrowing in front and almost straight behind, the surface punctured like that of the head; elytra broad, parallel to about the middle, with a broad, shallow, oblique depression extending from the shoulders downwards, the suture also depressed at the base, the surface densely, coarsely, and rather shallowly punctured; legs densely pubescent, moderately long, reddish-testaceous, the apical halves of the tibiæ (and sometimes the femora in the middle) piceous, the tarsi flavo-testaceous; the four anterior tibiæ sinuously curved in both sexes, strongly so in the male, the front pair with a long sharp tooth on the inner side at the apex in the male, the hind pair with a matted tuft of coarse fulvous hairs at the outer apical angle in the female; the femora rather slender, the hind pair in the male very broadly widened, grooved on their inner side, and the concavity filled with a dense row of short fulvous hairs.

Length 3–3½ millim. (♂ ♀.)

Hab. GUATEMALA, San Lucas Toliman 5000 feet, San Gerónimo 3000 feet (*Champion*).

One male and three female examples. The large size, robust build, exceedingly stout antennæ, the apical joint of which is very elongate and subcylindrical in the male, peculiar elytral markings, &c., distinguish this remarkable species from all others of the genus here enumerated. In the excavate and densely ciliate inner margin of the hind femora in the male it resembles the following, *X. forticornis*. The four anterior tibiæ are sinuously curved in both sexes, very strongly so in the male, the hind pair having a thick tuft of fulvous hairs at the outer apical angle in the female. The apical joint of the antennæ is ovate in the female and elongate and a little curved in the male. This is one of a group of species somewhat numerously represented in Central America, and, like the following, possesses very peculiar sexual characters.

8. **Xylophilus forticornis.** (Tab. VIII. figg. 8, ♂; 8 *a*, hind leg.)

Rather short, subparallel, broad, robust, opaque, very densely clothed with rather long, semierect, silky pubescence; the head and prothorax brownish-black, or ferruginous much stained with piceous, the anterior part of the head always ferruginous; the elytra brownish- or fusco-testaceous, with a broad, ill-defined piceous-brown fascia before, and a rather narrower one below the middle, the pubescence between and beyond these fasciæ yellowish or ashy, and forming a more or less distinct transverse median band and an apical patch (this latter sometimes showing a tendency to form a common triangular spot just below

the second fascia), which are connected along the suture by a line of similar pubescence. Head large and broad, very densely and finely punctured; eyes very hairy, large, contiguous in the male, narrowly separated in the female, coarsely granulated, deeply emarginate, the head in both sexes somewhat broadly extended on either side behind them and rounded externally; antennæ piceous or fusco-ferruginous, with the apical joint and one or more of the basal ones ferruginous, sometimes in great part ferruginous, densely pubescent, in both sexes exceedingly stout—(♂) moderately long, widening a little outwardly, joint 2 more than half the length of 3, 3–9 about equal in length, 9 and 10 a little shorter, 11 three times as long as 10, slightly curved—(♀) shorter, more thickened outwardly, joints 8–10 transverse, 11 about twice the length of 10, ovate; prothorax narrower than the head, rather convex, as long as broad (a little longer in the male than in the female), the sides rounded and converging in front, straight behind, the surface punctured like that of the head; elytra broad, parallel to about the middle, with a very shallow oblique depression (sometimes obsolete) extending from the shoulders downwards, the surface densely, coarsely, and rather shallowly punctured; legs densely pubescent, moderately long, reddish- or fusco-testaceous, the tarsi paler; the four anterior tibiæ sinuously curved in both sexes, strongly so in the male, the front and middle pairs with a long sharp tooth on the inner side at the apex in the male, the hind pair with a matted spine-like tuft of fulvous hairs at the outer apical angle in the female; the femora rather slender, the hind pair in the male very broadly widened, grooved on their inner edge, and the concavity filled with a row of short fulvous hairs.

Length $2\frac{1}{4}$–$2\frac{3}{4}$ millim. (♂ ♀.)

Hab. Panama, Bugaba, Volcan de Chiriqui 3000 feet (*Champion*).

Six examples, three of each sex. Smaller than *X. lacertosus*; the eyes contiguous in the male, more narrowly separated in the female; the elytra differently marked, the ashy pubescence forming transverse bands instead of longitudinal streaks; the legs almost unicolorous reddish-testaceous. The sexual characters are very similar.

9. **Xylophilus humeralis.** (Tab. VIII. fig. 9, ♀.)

Moderately elongate, parallel, broad, robust, opaque, very thickly clothed with rather long, fine, semierect pubescence; black, the shoulders of the elytra reddish or testaceous, the pubescence along the edge of the suture ashy, and a longitudinal stripe of similarly-coloured pubescence running down from the humeral spot. Head very large in the male, a little smaller in the female, densely and roughly punctured; eyes very hairy—exceedingly large, coarsely granulated, and contiguous in the male, smaller, more finely granulated, and narrowly separated in the female,—deeply emarginate, the head in both sexes extended on either side behind them, but more broadly so in the female, and rounded externally; antennæ entirely black, densely clothed with long pubescence, exceedingly stout in both sexes—(♂) long, extending to far beyond the middle of the elytra, filiform, joint 2 a little shorter than 3, 3 considerably shorter than 4, 4–10 much longer than broad, and about equal in length, 11 two a half times as long as 10, slightly curved—(♀) much shorter, widening outwardly, joint 2 a little shorter than 3, 3 as long as 4, 5–8 gradually wider, 9 and 10 transverse, 11 ovate and nearly twice as long as 10; prothorax rather convex, narrower than the head, as long as broad, the sides rounded and converging in front, straight behind, the surface punctured like that of the head; elytra nearly twice as wide as the prothorax, parallel to about the middle, densely and coarsely punctured; legs moderately long, piceous, the outer joints of the tarsi more or less testaceous; the four anterior tibiæ sinuously curved in the male, feebly so in the female, the front pair with a sharp tooth on the inner side at the apex in the male, the hind pair with a matted spine-like tuft of fulvous hairs at the outer apical angle in the female; the femora rather slender (the hind legs in the male broken off).

Length 3 millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

One specimen only of each sex. In this species the antennæ are even stouter than in *X. lacertosus* &c.; these organs are very long in the male (longer than in the same

sex of *X. lacertosus*) and in the female are much shorter and still more thickened outwardly. The unique male example is unfortunately imperfect, the hind legs being missing. The only Central-American species nearly allied to it is the following.

10. **Xylophilus curvipes.** (Tab. VIII. figg. 10, ♂; 10 *a*, hind leg.)

Moderately elongate, parallel, robust, opaque, very thickly clothed with rather long, fine, semierect pubescence; black, the base of the elytra fulvo-testaceous, the rest of the elytra uniformly clothed with greyish pubescence. Head large, densely and roughly punctured; eyes (♂) hairy, very large, approximate, coarsely granulated, deeply emarginate, the head extended on either side behind them and rounded externally; palpi piceous; antennæ (♂) black, the apical joint ferruginous at the tip, densely pubescent, very stout, extending to beyond the middle of the elytra, filiform, joint 2 only a little shorter than 3, 3–8 about equal in length, 9 and 10 transverse, 11 fully three times as long as 10, slightly curved; prothorax narrower than the head, rather convex, as long as broad, the sides rounded and converging in front, straight behind, the surface punctured like that of the head; elytra parallel in their basal half, moderately broad, densely and coarsely punctured; legs (♂) moderately long, rather slender, piceous, the knees and the base of the femora reddish-testaceous, the tarsi (except the apical half of the first joint of the hind pair) flavo-testaceous; the hind femora broadly widened, grooved on the inner side, the concavity filled with short fulvous hairs; the tibiæ a little curved, the intermediate pair strongly so without, and abruptly sinuate within, the anterior pair furnished on the inner side at the apex with a long sharp spur. Length $2\frac{1}{2}$ millim. (♂.)

Hab. GUATEMALA, San Gerónimo (*Champion*).

One male example. Smaller and narrower than *X. humeralis*; the antennæ shorter and not nearly so stout in the male (the third joint not shorter than the fourth and the penultimate joints transverse); the elytra with the entire base fulvous, and for the rest uniformly pubescent (without trace of a sublateral greyish-pubescent stripe). The usual oblique depression on each elytron is scarcely indicated.

Leconte's brief description of *X. basalis*, from Illinois, agrees in many respects with this insect. In *X. basalis*, however, the ninth and tenth joints of the antennæ are longer (transverse in *X. curvipes*) and the eleventh is shorter (as long as the two preceding united in *X. basalis*, nearly as long as the three preceding in *X. curvipes*); the palpi are rufous (piceous in *X. curvipes*); and the elytra, apparently, have the base more broadly fulvous. Leconte's type of *X. basalis* had all the legs broken off; but from the form of the antennæ it was no doubt a male.

11. **Xylophilus flavitarsis.** (Tab. VIII. fig. 11, ♀.)

Rather short, subparallel, comparatively broad and robust, opaque, thickly clothed with fine, semierect pubescence; black, the pubescence along the edge of the suture from the apex nearly to the base ashy, a transverse band of similarly-coloured pubescence (not reaching the suture, and becoming wider outwardly and extending to the lateral margin) at about the middle of the elytra, the pubescence at the sides of the prothorax also ashy in tint. Head moderately large, densely and finely punctured; eyes (♀) hairy, rather large, coarsely granulated, deeply emarginate, separated by a space about equalling half the diameter of the eyes as seen from above, the head broadly extended on either side behind them and rounded externally; antennæ (♀) black, the apical joint ferruginous at the tip, densely pubescent, exceedingly stout, widening outwardly, reaching a little beyond the middle of the elytra, joints 2 and 3 subequal, 3–7 longer than broad, 8 as broad as long, 9 and 10 transverse, 11 ovate and nearly twice as long as 10; prothorax narrower than the head, rather convex, as long as broad, the sides rounded and converging in front,

straight behind, the surface punctured like that of the head; elytra nearly twice as wide as the prothorax, parallel to about the middle, densely and coarsely punctured, with a shallow oblique depression extending from the shoulders downwards; legs (♀) moderately long, rather slender (the femora included), black, the tarsi entirely flavo-testaceous, the tibiæ almost straight, the hind pair with a matted spine-like tuft of fulvous hairs at the outer apical angle.

Length $2\frac{1}{3}$ millim. (♀.)

Hab. GUATEMALA, Cerro Zunil 4000 feet (*Champion*).

Two examples, both females; the male doubtless has the hind femora incrassate. Allied to *X. humeralis*, but smaller and shorter; the elytra black, with a transverse median band (not reaching the suture) of ashy pubescence, the suture also clothed with similarly-coloured pubescence; the tarsi entirely flavo-testaceous.

12. **Xylophilus v-notatus.** (Tab. VIII. fig. 12, ♀.)

Moderately elongate, subparallel, rather broad and robust, opaque, thickly clothed with fine, semierect pubescence; brownish-black, the elytra each with a long narrow **V**-shaped mark (forming together a perfect **W**) of whitish silky pubescence towards the suture about the middle, this mark connected internally with a similarly-coloured streak of pubescence extending along the suture and externally with a large subtriangular lateral patch (the latter extended along the lateral margin to the apex), the base narrowly and the apex more broadly clothed with whitish pubescence, for the rest clothed with dark brownish pubescence, the prothorax also with whitish pubescence at the sides. Head moderately large, densely and finely punctured; eyes (♀) hairy, rather large, coarsely granulated, deeply emarginate, narrowly separated, the head broadly extended on either side behind them and rounded externally; antennæ (♀) piceo-ferruginous, the apical three joints darker, densely pubescent, about reaching the middle of the elytra, exceedingly stout, widening outwardly, joints 2 and 3 subequal, 4 a little longer than 3, 4–10 gradually becoming shorter and wider, 7 and 8 about as broad as long, 9 and 10 transverse, 10 strongly so, 11 a little narrower than, and nearly twice as long as, 10, short, ovate; prothorax narrower than the head, rather convex, as long as broad, the sides rounded and converging in front, straight behind, the surface punctured like that of the head; elytra about twice as wide as the prothorax, parallel in their basal half, with an oblique depression extending from the shoulders downwards, densely and coarsely punctured; legs (♀) moderately long, rather slender (the femora included), piceous, the four anterior femora fusco-ferruginous, the tarsi entirely testaceous, the tibiæ almost straight, the hind pair with a matted spine-like tuft of fulvous hairs at the outer apical angle.

Length $2\frac{3}{4}$ millim. (♀.)

Hab. GUATEMALA, Cerro Zunil 4000 feet (*Champion*).

One female example only of this very distinct species was obtained. Allied to *X. flavitarsis*; but larger and rather more elongate, the elytra with a very acutely angulated median fascia of silky whitish pubescence and the apex and lateral margins also clothed with similarly-coloured pubescence. The North-American *X. nebulosus*, Lec., seems to be an allied species; but it differs from *X.* **v**-*notatus* in having the base of the elytra reddish-brown.

13. **Xylophilus —— ?**

Hab. GUATEMALA, San Gerónimo (*Champion*).

A single female example of a species closely allied to *X. flavitarsis* and *X.* **v**-*notatus*, the head of which is unfortunately missing. The insect is blackish-brown in colour;

the elytra with an ashy-pubescent, testaceous, common, triangular patch towards the apex (much as in *X. lacertosus*) and a transverse median band of ashy pubescence, the latter connected externally with a stripe of similarly-coloured pubescence which extends from the base to the apex. The hind tibiæ have a matted spine-like tuft of fulvous hairs at the outer apical angle as in the female of *X. flavitarsis*.

14. **Xylophilus laticeps.**

Moderately elongate, convex, black, shining, thickly clothed with long, semierect, ashy pubescence. Head very large and broad, thickly and not very finely punctured; eyes (♂) very hairy, coarsely granulated, very deeply emarginate, large, somewhat widely separated, the head rather broadly and subangularly extended on either side behind them; palpi piceous; antennæ (♂) very pubescent, moderately long, stout, black, the tip of the last joint ferruginous, joint 2 rather more than half the length of 3, 3–10 about equal in length, longer than broad, 5–10 scarcely differing in width, 11 a little stouter and much longer than 10, ovate, acuminate; prothorax convex, much narrower than the head, nearly as long as broad, the sides rounded and converging in front, almost straight behind, the surface thickly and somewhat coarsely punctured; elytra rather short, much wider than the prothorax, convex, somewhat rounded at the sides, widest a little below the base, thickly and rather coarsely punctured; legs (♂) stout, brownish-black, the tarsi fusco-testaceous, the hind femora moderately clavate, the anterior tibiæ curved without, sinuous within, and with a short tooth on the inner side at the apex.

Length 2–2½ millim. (♂.)

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, El Reposo 800 feet (*Champion*).

Two examples from the Pacific slope of Guatemala and one from the Atlantic slope of Southern Mexico, all males. These differ from the same sex of the following similarly-coloured species in their very large and broad head, somewhat widely-separated eyes, and stout antennæ. The head is rather broadly and somewhat angularly extended on either side behind the eyes.

15. **Xylophilus atricolor.**

Rather short, convex, black, shining, thickly clothed with long, semierect, ashy pubescence. Head moderately large, finely and not very closely punctured; eyes very hairy, coarsely granulated, large, deeply emarginate, narrowly separated in the male, more distant in the female, the head narrowly extended on either side behind them and with slightly prominent hind angles; palpi testaceous; antennæ very pubescent, rather slender, black, the last joint ferruginous at the tip—(♂) moderately long, joint 2 considerably shorter than 3, 3–10 increasing a little in width but about equal in length, longer than broad, 11 stouter than, and more than twice as long as, 10, ovate, acuminate—(♀) much shorter, joints 6–10 transverse; prothorax convex, a little narrower than the head, about as long as broad, the sides rounded and converging in front, nearly straight behind, the surface thickly and somewhat coarsely punctured, the disc obsoletely canaliculate behind; elytra convex, rather short, at the base about one half broader than the prothorax, a little rounded at the sides, widest at the middle, thickly and rather coarsely punctured; legs stout, black, the tarsi entirely flavo-testaceous, the hind femora moderately clavate in both sexes; the anterior tibiæ on the outer side curved to beyond the middle and then abruptly bent inwards, on the inner side a little sinuate and at the apex furnished with a sharp tooth, in the male.

Length 1¾–2 millim. (♂ ♀.)

Hab. PANAMA, Bugaba (*Champion*).

Two examples. The more slender antennæ, narrower head, more approximate eyes,

and strongly-bowed anterior tibiæ distinguish the male of *X. atricolor* from the same sex of *X. laticeps*. The palpi and tarsi are entirely testaceous. The sexual differences in the form of the antennæ are similar to those of *X. cinctipennis* and *X. æquinoctialis*.

16. Xylophilus funereus.

Moderately elongate, rather broad, convex, subparallel, black, shining, thickly clothed with long, semierect, ashy pubescence. Head moderately large, closely and finely punctured; eyes (♂) very hairy, large, somewhat narrowly separated, moderately emarginate, not very coarsely granulated, the head narrowly extended on either side behind them and with rather prominent hind angles; palpi piceous-brown; antennæ (♂) moderately long, rather slender, black, joint 2 a little shorter than 3, 3–10 increasing a little in width, 10 about as broad as long, 11 stouter than, and about twice as long as, 10, ovate, acuminate; prothorax a little broader than long, not much narrower than the head, the sides rounded and narrowing in front, almost straight behind, the surface thickly and somewhat coarsely punctured; elytra convex, much broader than the prothorax, moderately long, subparallel in their basal half, very shallowly obliquely depressed on either side at the base, thickly and rather coarsely punctured; legs (♂) rather long, black, the apical joints of the tarsi testaceous, the hind femora moderately clavate, the anterior tibiæ feebly sinuous within and with a short tooth at the inner apical angle.

Length 2⅓–2½ millim. (♂.)

Hab. GUATEMALA, Quiche Mountains 8000 feet, Cerro Zunil 4000 feet, Chiacam (*Champion*).

One male example from each locality. More parallel, more elongate, and larger than the same sex of *X. atricolor*; the eyes a little more widely separated, the apical joint of the antennæ shorter, the tarsi and palpi darker, the anterior tibiæ very feebly curved and with the tooth at the inner apical angle shorter and finer. The slender antennæ and much narrower head distinguish it from *X. laticeps*. The Quiche specimen is immature, and has the basal joints of the antennæ and the front tibiæ fusco-testaceous. *X. ater*, Lec., from Texas, is probably a close ally of this species; Leconte's description is, however, too brief for identification, the form of the head and legs not being mentioned.

17. Xylophilus flavicornis.

Rather short, subparallel, black, shining, thickly clothed with long, semierect, ashy pubescence. Head thickly and finely punctured; eyes (♀) hairy, very large, very coarsely granulated, rather narrowly separated, feebly emarginate, the head very narrowly extended on either side behind them; palpi testaceous; antennæ (♀) moderately slender, short, testaceous, the basal joint infuscate, joint 2 globose, a little shorter than 3, 3 longer than 4, 4–10 transverse, 11 stouter than, and more than twice as long as, 10, ovate, acuminate; prothorax convex, narrower than the head, about as long as broad, the sides rounded and converging in front, almost straight behind, the surface thickly and somewhat coarsely punctured; elytra much wider than the prothorax, rather short, subparallel in their basal half, thickly and coarsely punctured; legs rather short, testaceous, the hind femora infuscate and moderately incrassate.

Length 1½ millim. (♀.)

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

One female example. The much smaller size and the testaceous antennæ and legs (the hind femora excepted) distinguish *X. flavicornis* from *X. atricolor* and *X. funereus*.

The eyes are very coarsely granulated, the head very narrowly extended on either side behind them

18. **Xylophilus quadrisignatus.** (Tab. VIII. fig. 13, ♂.)

Rather short, convex, shining, thickly clothed with long, semierect, ashy pubescence; black, the elytra each with two large testaceous spots, one at the shoulder and the other near the apex, the latter not quite reaching the suture (in one example still larger and extending to the apex). Head large and broad, thickly and somewhat coarsely punctured; eyes (♂) very hairy, deeply emarginate, very coarsely granulated, large, narrowly separated, the head narrowly extended on either side behind them and with rather prominent hind angles; antennæ (♂) moderately long, rather stout, thickly pubescent, ferruginous, the basal joint black, joint 2 only a little shorter than 3, 3–10 very gradually increasing in width, longer than broad, 10 nearly as broad as long, 11 much stouter than, and fully twice as long as, 10, ovate, acuminate; prothorax considerably narrower than the head, convex, as long as broad, the sides rounded and converging in front, almost straight behind, the surface thickly and somewhat coarsely punctured; elytra at the base about one half broader than the prothorax, moderately long, rather convex, a little rounded at the sides, widest at the middle, obliquely depressed on either side below the shoulders, thickly and coarsely punctured; legs stout, piceous, the base and apex of the tibiæ and the tarsi testaceous; the hind femora (♂) much thickened and subangularly dilated on the outer side beyond the middle; the anterior tibiæ (♂) slightly curved without, sinuous within, and with a short tooth on the inner side at the apex.

Length 2 millim. (♂.)

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Three male examples. Less parallel and more convex than *X. cinctipennis*, black, the elytra with a large testaceous spot at the shoulder and another near the apex. The pubescence is long, semierect, and rather coarse. The hind femora in the male are much thickened and somewhat angularly dilated on the outer side beyond the middle, the inner side being slightly sinuate.

19. **Xylophilus cinctipennis.**

Moderately elongate, subparallel, shining, thickly clothed with long, semierect, ashy pubescence; the head and prothorax black, the latter sometimes reddish; the elytra testaceous, with a transverse more or less curved black or piceous fascia on either side at the middle, the fascia not reaching the suture and extending upwards along the lateral margin, and sometimes with the scutellar region, apex, or the suture, very narrowly, infuscate. Head large and broad, finely and somewhat thickly punctured; eyes very large, very coarsely granulated, deeply emarginate, thickly clothed with long erect pubescence, narrowly separated in the male, more distant in the female, the head extended on either side behind them and with prominent hind angles; antennæ variable in colour, varying from black with the apical joint ferruginous to ferruginous with the two basal joints black—(♂) rather stout, moderately long, joint 2 a little more than half the length of 3, 3–10 differing very little in length or width, longer than broad, 11 twice as long as 10, ovate, acuminate—(♀) much shorter, joints 4–10 transverse; prothorax convex, narrower than the head, about as long as broad, shorter in the female, the sides rounded and converging in front, straight behind, the surface closely and somewhat coarsely punctured; elytra very much wider than the prothorax, subparallel in their basal half, with an oblique depression extending downwards from the shoulders towards the suture, closely and somewhat coarsely punctured; legs moderately long, rather stout, variable in colour—testaceous with the tibiæ (except at the base and apex) black and the outer halves of the femora darker, or entirely testaceous; the hind femora clavate in both sexes; the anterior tibiæ a little curved without, slightly sinuous within, and furnished with a short fine tooth on the inner side at the apex, in the male.

Length 2–2⅓ millim. (♂ ♀.)

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*); Guatemala, San Joaquin and San Gerónimo in Vera Paz, Volcan de Atitlan (*Champion*); Nicaragua, Chontales (*Janson*).

Two male and four female examples. A small shining species, with black head and thorax and testaceous elytra, the latter with a transverse curved black median fascia on either side; the pubescence is long, semierect, and rather coarse, and does not hide the punctuation; the eyes are very coarsely granulated, large, and hairy; the hind femora are clavate in both sexes; the anterior tibiæ in the male are slightly sinuate within and somewhat hooked at the tip.

20. **Xylophilus chiriquensis.** (Tab. VIII. fig. 14, ♂.)

Closely allied to *X. cinctipennis* and differing as follows:—The antennæ rather more elongate, black, the apical joint fusco-ferruginous; the median fascia of the elytra larger and broader, nearly reaching the suture but not continued upwards along the lateral margin; the anterior tibiæ (♂) curved to beyond the middle and then abruptly bent inwards, the inner edge sinuate, at the middle almost angulate, and furnished with a long sharp tooth at the apex.

Length $2\frac{1}{3}$ millim. (♂.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

One male example. This insect is extremely closely allied to *X. cinctipennis*, but the form of the male anterior tibiæ is very different. In our two males of *X. cinctipennis* the anterior tibiæ are feebly curved without, sinuous within, and the tooth on the inner side at the apex is fine and short; in the male of *X. chiriquensis* the anterior tibiæ are very abruptly bent inwards a little beyond the middle, and the tooth at the apex is longer and stouter.

21. **Xylophilus æquinoctialis.** (Tab. VIII. fig. 15, ♂.)

Short and rather broad, subovate, shining, thickly clothed with long, semierect, ashy pubescence; the head black; the prothorax reddish- or piceo-testaceous; the elytra testaceous or flavo-testaceous, with a black or piceous median fascia, the fascia nearly or quite reaching the suture, widened towards the lateral margin, and of variable width (in some specimens divided in the middle, in others narrow and subangulate), the scutellar region sometimes infuscate. Head large and broad, thickly and rather coarsely punctured; eyes hairy, very large, very coarsely granulated, moderately emarginate, narrowly separated in the male, more distant in the female, occupying almost the whole of the side of the head (the head very narrowly extended on either side behind them); antennæ entirely testaceous—(♂) moderately long, rather stout, joint 2 rather more than half the length of 3, 3 longer than 4, 4–10 very slightly decreasing in length and increasing in width, 9 and 10 about as broad as long, 11 very much stouter than, and more than twice as long as, 10, ovate, acuminate—(♀) much shorter, joint 2 very little shorter than 3, 7–10 strongly transverse, 11 about twice as long as 10; prothorax rather convex, a little narrower than the head, broader than long, the sides rounded and narrowing in front, straight behind, the surface thickly and somewhat coarsely punctured; elytra short, rather convex, at the base about one half broader than the prothorax, a little rounded at the sides, widest at the middle, with a shallow oblique depression extending from the shoulders downwards towards the suture, closely and somewhat coarsely punctured; legs rather stout, testaceous, the hind femora a little darker; the hind femora incrassate and the hind tibiæ a little thickened in both sexes; the anterior tibiæ slightly curved without and sinuous within, and with a short tooth on the inner side at the apex, in the male.

Length $1\frac{1}{2}$–$1\frac{2}{3}$ millim. (♂♀.)

Hab. MEXICO, Atoyac and Teapa (*H. H. Smith*); GUATEMALA, Cahabon, San Gerónimo, Zapote (*Champion*); PANAMA, Volcan de Chiriqui and David (*Champion*).

Var. The prothorax and elytra piceous-brown, the latter with the base testaceous (♀).

Hab. GUATEMALA, Cahabon (*Champion*).

Var. The prothorax piceous-brown; the median fascia of the elytra very broad and connected with a large triangular scutellar patch (♂).

Hab. PANAMA, Tolé (*Champion*).

Numerous examples of both sexes of the type, a single worn example of each variety.

Apparently a widely-distributed and not uncommon species in Central America. Allied to *X. cinctipennis*, but much smaller and much less elongate; the antennæ are entirely testaceous, and exhibit similar sexual differences, the apical joint, however, is proportionately stouter in the male; the head is similarly shaped, and the eyes are very hairy and very coarsely granulated; the thorax is broader than long; the elytra are much shorter and a little rounded at the sides, and have a similar median fascia; the hind femora are incrassate in both sexes; the anterior tibiæ in the male are similarly shaped. In an immature female example from San Gerónimo the head is fusco-testaceous and scarcely darker in colour than the thorax.

22. **Xylophilus sexmaculatus.** (Tab. VIII. fig. 16, ♂.)

Moderately elongate, rather broad, shining, clothed with fine decumbent pubescence; the head black; the prothorax reddish-testaceous; the scutellum piceous; the elytra testaceous, with a black spot at the shoulders and two others at the middle (an oblong one on the centre of the disc and an oblique one between this and the lateral margin) and a narrow infuscate fascia immediately before the apex. Head moderately large, finely and somewhat closely punctured; eyes (♂) hairy, rather large, somewhat widely separated, not very coarsely granulated, deeply emarginate, the head somewhat broadly extended on either side behind them and with rather prominent hind angles; palpi testaceous; antennæ (♂) testaceous, long and slender, joint 2 short and globose, shorter than 3, 3–10 differing very little in length but gradually becoming a little stouter, rather elongate, 11 twice as long as, and stouter than, 10, ovate, acuminate; prothorax broader than long, narrower than the head, obsoletely canaliculate, the sides very gradually converging from the base, rounded in front, the base grooved within in the middle, the surface densely and somewhat coarsely punctured (more closely and more coarsely so than the head); elytra rather broad, much wider than the prothorax, widest at the middle, with an oblique depression extending from the shoulders downwards, the suture also depressed at the base, the sides almost straight in front, the surface closely and somewhat coarsely punctured (the punctuation less dense but not coarser than that of the prothorax); legs (♂) entirely testaceous, rather long and slender, the hind femora slightly clavate, the anterior tibiæ abruptly bent inwards at the middle and furnished with a sharp tooth on the inner side at the apex, the four hinder tibiæ very slightly sinuous.

Length 2 millim. (♂.)

Hab. GUATEMALA, Cerro Zunil 4000 feet (*Champion*).

One male example. This is one of several species of *Xylophilus* of which specimens were obtained by myself in the vicinity of the coffee-estate of "Las Nubes," on the Pacific slope. In *X. sexmaculatus* the hind femora are not excavate on their inner

edge, as they are in the males of *X. fragilis*, &c.; and the elytra are gradually widened to about the middle. Several of the preceding species are closely allied to it.

23. **Xylophilus fragilis.** (Tab. VIII. figg. 17, ♂; 17 *a*, hind leg.)

Moderately elongate, narrow, subparallel, finely pubescent, shining; fusco-testaceous, the eyes black; the elytra flavo-testaceous, with a fuscous lateral patch (gradually shading off into the ground-colour) about the middle and the suture very narrowly infuscate towards the apex. Head moderately large, finely and closely punctured; eyes (♂) pubescent, large, occupying the whole of the side of the head (the head very narrowly extended behind them), deeply emarginate, somewhat coarsely granulated, narrowly separated; antennæ (♂) long and slender, testaceous, joint 2 globose, about half the length of 3, 3–10 elongate, 3 longer than 4, 6–8 each as long as 3, 9 and 10 a little shorter and broader, obovate, 11 wider than, and nearly twice as long as, 10, ovate, acuminate; prothorax broader than long, narrower than the head, rather convex, subquadrate, the sides a little rounded and converging in front, the surface punctured like that of the head, the disc with a smooth raised line in the middle at the base and transversely depressed on either side of this; elytra rather long, parallel in their basal half, each with an oblique depression below the shoulder, the suture also depressed at the base, the surface finely and closely punctured (the punctuation not so dense but a little coarser than that of the prothorax); beneath piceous-brown; legs (♂) long and quite slender (including the femora), testaceous; the hind femora not stouter than the others, excavate along their lower edge, the part of the femur on either side of this extended and forming a large elongate spoon-shaped appendage which is spongy within and piceous in colour; the tibiæ scarcely curved.

Length $1\frac{3}{4}$ millim. (♂.)

Hab. GUATEMALA, San Lucas Toliman 5000 feet (*Champion*).

One example, from the oak-woods in the vicinity of the Lake of Atitlan. Narrower, smaller, and more parallel than *X. sexmaculatus*; the upper surface, legs, and antennæ testaceous; the eyes black; the antennæ and legs long and quite slender; the elytra with an indeterminate fuscous lateral patch. The very peculiar form of the hind femora of the male is a striking character in this insect: a somewhat similar structure is to be found in *Uroplatopsis appendiculata*, a species of Lagriidæ.

24. **Xylophilus bicolor.** (Tab. VIII. fig. 18, ♂.)

Short and rather broad, finely pubescent, shining; the head and prothorax fusco-testaceous, the eyes black; the scutellum and elytra black, the latter with the base rather broadly flavo-testaceous, this colour not quite extending to the suture. Head comparatively small, finely and closely punctured; eyes (♂) pubescent, rather small, finely granulated, deeply emarginate, widely separated, the head narrowly extended on either side behind them and with somewhat prominent hind angles; antennæ (♂) short, slender, thickening outwardly, testaceous, joint 2 globose, stout, 3 slender, one third longer than 2, 4–6 each shorter than 3, subequal, 7–10 stouter and gradually becoming shorter, 10 not much longer than broad, 11 stouter than, and about twice as long as, 10, ovate; prothorax rather convex, narrower than the head, subquadrate, nearly as long as broad, narrowing a little in front, very closely punctured (the punctuation somewhat coarser than that of the head); elytra broad, rather convex, widest about the middle, the sides a little rounded, straight in front, the suture depressed at the base, the surface finely and closely punctured (the punctuation a little coarser than that of the prothorax); beneath black, the head and prothorax testaceous; legs (♂) moderately long, testaceous, the hind femora darker; all the femora slender, the hind pair grooved on the inner edge, the part of the femur on either side of this a little extended and piceous in colour (the lower edge projecting a little, and the femora apparently subangularly dilated near the apex); the tibiæ almost straight.

Length $1\frac{2}{3}$ millim. (♂.)

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

One male example. This peculiar little species is not very closely allied to any other here described; the short and rather broad form, shining surface, comparatively small head, small eyes, and peculiar coloration distinguish it easily. The usual oblique post-humeral impression on the elytra is scarcely indicated. The hind femora are grooved on the inner edge, somewhat as in the same sex of *X. fragilis*.

25. **Xylophilus unifasciatus.** (Tab. VIII. fig. 19, ♂.)

Short and rather broad, opaque, clothed with fine silky appressed pubescence; the head black, the prothorax ferruginous, the scutellum piceous, the elytra brownish-testaceous, with a rather narrow, transverse, piceous band about the middle, this band extending to the lateral margin and continued along it to the base. Head large and broad, densely and very finely punctured, very opaque; eyes (♂) large, slightly pubescent, coarsely granulated, occupying the whole of the side of the head, the head not extended behind them, widely separated (the intraocular space as broad as the diameter of the eye seen from above), not very deeply emarginate; antennæ (♂) short, slender, thickening outwardly, testaceous, joint 2 stouter and a little shorter than 3, 3 and 4 equal in length, 5–10 gradually increasing in width, 10 about as long as broad, 11 twice as long as, and broader than, 10, ovate, acuminate; prothorax considerably narrower than the head, rather convex, nearly as long as broad, the sides straight behind and rounded and converging in front, the surface very opaque and punctured like that of the head; elytra broad, widest at the middle, feebly transversely depressed below the base, the sides straight in front, the surface finely, densely, and shallowly punctured (the punctuation a little coarser than that of the prothorax); beneath, the prothorax excepted, piceous; legs (♂) moderately long, testaceous; the femora rather slender, the hind pair very little stouter than the others and grooved on the inner edge, the part of the femur on either side of this a little extended and piceous in colour; all the tibiæ slender and almost straight.

Length 2 millim. (♂.)

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

One male example. In this small species the head and thorax are scabrous; the former is cut off behind in a line with the hinder portion of the eyes (the head being not at all extended behind them), very broad, and opaque; the eyes are large and very widely separated; the elytra are not so dull as the head and thorax, and have a transverse fascia at the middle extending completely across. In the form of the hind femora in the male it approaches *X. bicolor*.

26. **Xylophilus inflatus.** (Tab. VIII. fig. 20, ♂.)

Short and broad, convex, finely pubescent; the head black, opaque; the prothorax fusco-ferruginous, opaque; the scutellum black; the elytra black, with the base broadly, a large oblique spot a little below the middle (not quite reaching the suture and distant from the lateral margin), and the apices brownish-testaceous. Head large and broad, densely punctured; eyes (♂) slightly pubescent, rather coarsely granulated, large, occupying the whole of the side of the head (the head not at all extended behind them), very widely separated (the intraocular space considerably broader than the diameter of the eye seen from above), somewhat feebly emarginate; antennæ (♂) short, slender, widening a little outwardly, testaceous, joint 2 very little shorter than 3, 3 and 4 subequal, 5–10 very gradually increasing in width, 9 as broad as long, 10 transverse, 11 about twice as long as, and a little stouter than, 10, ovate; prothorax at the base scarcely narrower than the head, broader than long, rather convex, the sides converging almost from the base, the surface densely and finely punctured; elytra about one half broader than the prothorax, comparatively short and broad, widest about the middle, the sides a little rounded, the surface very closely and finely

punctured and without sutural or post-humeral depression; beneath, the prothorax excepted, black; legs (♂) slender, rather short, testaceous; the hind femora flattened and considerably wider than the others, not excavate on the inner edge; the tibiæ straight, the hind pair flattened and dilated from the base to the apex.

Length 1½ millim. (♂.)

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

One male example. In the form of the head and antennæ this minute species resembles *X. unifasciatus*. The hind femora and hind tibiæ are flattened and dilated, the former simple and not excavate along their inner edge. The short, broad, convex form and elytral markings distinguish it from all others of the genus here enumerated.

X. ventricosus, Lec., has similarly inflated elytra.

27. **Xylophilus laticollis.**

Short and very broad, convex, finely and densely pubescent; the head black, testaceous in front; the prothorax and scutellum fusco-ferruginous; the elytra obscure testaceous, with a broad brownish fascia before and a narrower one beyond the middle, the pubescence on the light parts ashy in colour (forming three transverse bands), that on the fasciæ sparser and darker. Head large and broad, densely punctured; eyes moderately large, pubescent, somewhat finely granulated, occupying the whole of the side of the head and laterally projecting (the head not at all extended behind them), very widely separated, somewhat feebly emarginate; antennæ short, slender, widening a little outwardly, testaceous, joint 2 stout and moniliform, 3 much more slender and very little longer than 2, 3–5 about equal in length, 6–10 gradually becoming shorter and wider, 10 transverse, 11 stouter than, and about twice as long as, 10, ovate, acuminate; prothorax strongly transverse, fully as wide at the base as the head, narrowing almost from the base, densely and finely punctured; elytra comparatively short and broad, widest about the middle, the sides a little rounded, the surface slightly shining, very closely and finely punctured, and without sutural or post-humeral depression; beneath, the prothorax excepted, piceous; legs slender, rather short, testaceous, the hind femora only a little stouter than the others, the tibiæ almost straight.

Length 2 millim.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

One example, apparently a female. *X. laticollis* resembles *X. unifasciatus* and *X. inflatus* in the shape of the head, and the eyes project in a similar manner. The thorax is dull ferruginous and very strongly transverse; the elytra are even broader than in *X. inflatus*, testaceous in colour, with a broad brownish fascia before and a narrower one beyond the middle, the testaceous parts being densely clothed with ashy pubescence; the legs are short, slender, and testaceous, the hind femora very little stouter than the others.

28. **Xylophilus corticarioides.**

Short and convex, obovate, piceous-black, the base of the elytra brownish, rather shining, the entire surface uniformly clothed with fine, ashy, appressed pubescence. Head moderately large, closely and finely punctured; eyes small and prominent, entire, very widely separated, finely granulated, the head narrowly extended on either side behind them and with rather prominent hind angles; antennæ short, very slender, widening a little outwardly, testaceous, joint 2 about half the length of 1, 3 one and a half times the length of 2, 4 shorter than 3, 4–7 elongate, subequal, 8–10 wider, 10 about as broad as long, 11 stouter

and much longer than 10, ovate, acuminate; prothorax about as long as broad, convex, narrower than the head, the sides rounded and converging in front, almost straight behind, the surface punctured like that of the head; elytra short and broad, widest about the middle, a little rounded at the sides, feebly transversely depressed below the base, closely and finely punctured; beneath black, densely pubescent; legs very slender, moderately long, piceous-brown, the extreme base of the four hinder tibiæ, the anterior tibiæ entirely, and the tarsi testaceous, the hind femora slender and only a little stouter than the others.

Length 1½ millim.

Hab. PANAMA, Los Remedios (*Champion*).

One example, of uncertain sex. *X. corticarioides* has somewhat the facies of a small *Corticaria*; it is about the same size as *X. sericeus*, but has the head and antennæ very differently formed, the legs much more slender, and the elytra broader behind, the general shape being obovate.

29. **Xylophilus sericeus.** (Tab. VIII. figg. 21, ♂; 21 *a*, hind leg.)

Short and broad, rather convex, piceous-brown, opaque, uniformly clothed with exceedingly fine, sericeous, ashy, pruinose pubescence. Head large and broad, densely and minutely punctured; eyes (♂) black, pubescent, very large, occupying the whole of the side of the head (the head not at all extended behind them), narrowly separated, coarsely granulated, deeply emarginate; antennæ (♂) very pubescent, long and slender, filiform, extending to beyond the middle of the elytra, testaceous, joint 2 exceedingly short, globose, not half the length of 3, 3 a little longer than 4, 4 shorter than 5, 5–10 elongate, becoming a little shorter outwardly, 11 about twice as long as, and stouter than, 10, ovate, acuminate; prothorax convex, much narrower than the head, as long as broad, narrowing a little in front, the disc very finely and obsoletely canaliculate, and with an oblique groove on either side, the grooves confluent just before the base and together forming a U-shaped depression, the surface densely and exceedingly minutely punctured (the punctuation only visible under a powerful lens); elytra rather short, comparatively convex, very much broader than the prothorax, subparallel in their basal half, the surface densely and finely punctured (the punctuation coarser than that of the prothorax), and without sutural or posthumeral depression; beneath coloured as above; legs slender and moderately long, testaceous; the hind femora (♂) very little stouter than the others and deeply grooved on the inner edge, the part of the femur on either side of this a little extended and densely fringed with short fulvous hairs; all the tibiæ moderately curved.

Length 1½ millim. (♂.)

Hab. PANAMA, Bugaba (*Champion*).

One male example. This minute species possesses a different facies from most of the other Central-American members of the genus; the upper surface is piceous-brown, and uniformly clothed with exceedingly fine, silky, pruinose pubescence; the punctuation of the head and thorax is very minute, and that of the elytra very fine; the antennæ are very pubescent, long and slender, with the second joint exceedingly short and the apical joint longer and stouter than the tenth; the hind femora (in the male) are grooved on the inner edge and ciliate. In this last-mentioned character *X. sericeus* approaches *X. fragilis* and *X. unifasciatus*.

30. **Xylophilus femoralis.** (Tab. VIII. figg. 22, ♂; 22 *a*, hind leg; 22 *b*, antenna.)

Oblong ovate, rather narrow, black, densely clothed with short, silky, appressed brownish pubescence, the

pubescence on the prothorax and on the base and apex of the elytra (the scutellar region excepted) whiter, that of the under surface silvery-white, the prothorax opaque, the head and elytra (when denuded of pubescence) shining. Head large, closely and finely punctured; eyes (♂) finely pubescent, very large, occupying the whole of the side of the head (the head not extended behind them), narrowly separated, rather coarsely granulated, moderately emarginate; palpi fusco-testaceous; antennæ (♂) long and stout, very pubescent, black, the two basal joints fusco-testaceous, joints 1–3 rather slender, 2 very short, not half the length of 3, 3 and 4 about equal in length, 4–10 much wider than 3, flattened and subtriangular, longer than broad, 11 stouter and about one third longer than 10, obliquely truncate at the apex; prothorax convex, much narrower than the head, nearly as long as broad, rounded and narrowed at the sides in front and a little narrowed behind, the disc with an oblique depression on each side a little before the middle and a shorter and shallower one on either side near the base (the basal depressions nearer together than the others), the surface closely and finely punctured; elytra convex, at the base about one half broader than the prothorax, a little rounded at the sides, widest at the middle, very shallowly transversely depressed below the base, the surface closely and finely punctured; legs (♂) comparatively short, black, the tarsi flavo-testaceous, the base of the tibiæ testaceous, the four anterior femora slender, the hind femora exceedingly broad and stout, the anterior tibiæ slightly hooked at the inner apical angle.

Length $1\frac{2}{3}$ millim. (♂.)

Hab. GUATEMALA, Zapote (*Champion*).

One male example. This insect may be known at once from the other unicolorous black species here described by the short appressed silky pubescence and more opaque surface. The antennæ have their joints 4–10 subtriangular, broad, and somewhat flattened. The thorax has four depressions, two on each side of the disc. The hind femora (♂) are exceedingly stout and broad, and have on the inner side at the middle an indistinct tooth. The anterior tibiæ are scarcely more curved than the intermediate pair.

31. **Xylophilus argentatus.** (Tab. VIII. fig. 23, ♂.)

Elongate, rather narrow, parallel, black, opaque, very densely clothed with fine, scale-like, closely appressed, bluish-white, submetallic pubescence; the labrum and oral organs piceous-brown; the elytra each with a very sharply defined, large, subtriangular, lateral patch a little below the middle, this patch deeply triangularly excised behind, occupying about two-thirds of the width of each elytron as seen from above, and densely clothed with dark coppery-brown appressed pubescence. Head moderately large, closely and minutely punctured; eyes (♂) comparatively small, very widely separated, finely granulated, feebly emarginate, distant from the base of the head, the sides of the latter obliquely converging behind them; antennæ (♂) slender, moderately long, subfiliform, piceous-brown, joint 2 short, rather more than half the length of 3, 3–10 very gradually decreasing in length, 10 about as broad as long, 11 stouter and considerably longer than 10, ovate, acuminate; prothorax about as long as broad, narrower than the head, somewhat flattened on the disc, feebly dilated at the sides anteriorly (about as wide here as at the base), and the sides behind this slightly compressed, the surface closely and minutely punctured; elytra comparatively very elongate, parallel, much wider than the prothorax, broadly and shallowly depressed below the base, closely and finely punctured; beneath black, densely pubescent; legs (♂) long and quite slender (the femora included), blackish-brown, the tarsi lighter, the hind femora simple, the tibiæ almost straight.

Length $2\frac{1}{2}$ millim. (♂.)

Hab. GUATEMALA, Quiche Mountains 8000 feet (*Champion*).

One male example. This remarkable insect is not closely allied to any other species of the genus. The very dense, scale-like, bluish-white, almost silvery, pubescence resembles that of certain Curculionidæ; the general shape is elongate and Anthiciform;

the pubescence (except on the elytral spots) is so dense as to completely hide the punctuation; the antennæ are slender and subfiliform, with the second joint short and the apical joint a little stouter and longer than the tenth; the legs are long and quite slender, the hind femora neither dilated nor grooved and the front tibiæ not hooked at the tip (in the male). The large lateral mark on the elytra is very sharply defined. Narrower and more elongate than *X. singularis*, the antennæ much shorter and more filiform, the head somewhat similarly shaped.

Apparently allied to *X. quercicola*, Schwarz, from Florida.

32. **Xylophilus singularis.** (Tab. VIII. fig. 24, ♂.)

Moderately elongate, black, opaque, very densely clothed with fine, silky, closely appressed, bluish-white pubescence; the labrum and oral organs testaceous; the elytra each with a somewhat rounded, sharply defined spot close to the suture at the base and a much larger one near the suture just below the middle, these spots densely clothed with dark fulvous-brown pubescence. Head large and broad, sparsely and minutely punctured; eyes comparatively small, very widely separated, feebly emarginate, finely granulated, distant from the base of the head, the sides of the latter obliquely converging behind them; antennæ (♂) long and quite slender, the apical three joints somewhat abruptly larger, black, the two basal joints testaceous, joint 1 comparatively elongate, as long as 2 and 3 united, 2 more than half the length of 3, 3–8 elongate and subequal, 9 and 10 wider and subtriangular, each about as long as 8, 11 stouter and much longer than 10, ovate, acuminate; prothorax about as long as broad, narrower than the head, somewhat flattened on the disc, dilated at the sides before the middle and a little wider here than at the base, the sides compressed behind this (viewed laterally, with a deep transverse groove extending from the flanks upwards), the base feebly sinuate on either side, the surface closely and minutely punctured; elytra rather short, nearly twice as wide as the prothorax, widest at the middle, parallel in front, broadly transversely depressed below the base, the space occupied by the basal spots a little raised, the surface very closely and minutely punctured; beneath black, densely pubescent; legs very long and slender, black, the tarsi and the anterior tibiæ fusco-testaceous; the hind femora (♂) slender, very little stouter than the others, emarginate on the inner side some distance before the apex (appearing subangularly dilated*), and grooved beneath; the tibiæ almost straight.

Length 2¼ millim. (♂.)

Hab. GUATEMALA, San Lucas Toliman 5000 feet (*Champion*).

One male example. This is one of a group of species somewhat numerously represented in Central America, from the State of Panama to the Los Altos region of Guatemala. *X. singularis* possesses a very different facies from any other member of the genus: in the peculiar dense bluish-white submetallic pubescence it approaches *X. argentatus*. The eyes are almost entire and distant from the base of the head; the antennæ are very slender and elongate, and have the apical three joints stouter than the rest; the thorax is dilated in front and compressed at the sides; the legs are very slender and elongate.

33. **Xylophilus suturalis.** (Tab. VIII. fig. 25.)

Elongate, parallel, moderately broad, black, densely clothed with fine pruinose pubescence, opaque (when denuded of pubescence shining); the head brownish in front, with a triangular olivaceous patch at the base (divided down the middle by a greyish line), for the rest grey; the prothorax with a sinuous olivaceous

* Our artist has omitted to show this in the figure.

band on either side of the disc (transversely connected a little behind the middle, confluent in front, and extending inwards at the base), enclosing two narrow transverse greyish marks, and for the rest grey; the scutellum grey; the elytra olivaceous, with a narrow well-defined sutural stripe, which is widened towards the apex, and the shoulders and lateral margins, narrowly, bluish-grey. Head moderately large, rather long, very closely and finely punctured, and with a smooth central line; eyes not very large, prominent, distant from the base of the head (the head broadly extended behind them and rounded laterally), widely separated, rather deeply emarginate, finely granulated; antennæ rather short, moderately stout, widening outwardly, piceous, the two basal joints and the apical one lighter, joint 2 short, half the length of 3, 4 much shorter than 3, 4–10 subtriangular, gradually becoming shorter and wider, 9 and 10 broader than long, 11 stouter and much longer than 10, ovate, acuminate; prothorax about as long as broad, a little wider than the head, the sides dilated in front, somewhat compressed behind this, and thence gradually converging to the base, the base feebly sinuate on either side, the disc obsoletely canaliculate and with a transverse depression before the base, the surface densely and finely punctured; elytra at the base about one half broader than the prothorax, long, parallel, flattened on the disc and broadly and shallowly transversely depressed below the base, closely and somewhat coarsely punctured, the space occupied by the sutural stripe smoother; beneath blackish-brown, very densely clothed with greyish pruinose pubescence; legs long, moderately slender, blackish, the tarsi and the front tibiæ lighter, densely clothed with greyish pruinose pubescence, the hind femora simple, the tibiæ almost straight.

Length 3 millim.

Hab. Panama, Bugaba (*Champion*).

One specimen, probably a female. *X. suturalis* is quite unlike any other species of the genus known to me. In its elongate Anthiciform shape it approaches *X. argentatus* and *X. anthicoides*. The thorax is distinctly wider than the head, and broadest in front; the antennæ have their joints 4–10 subtriangular; the elytra are long and parallel and flattened on the disc; the surface is covered with a pruinose pubescence, which does not (as in *X. argentatus*) completely hide the punctuation. The peculiar arrangement and colour of the pubescence on the elytra—the suture, lateral margins, and shoulders being bluish-grey and the rest of the surface olivaceous—is very characteristic.

34. **Xylophilus anthicoides.** (Tab. VIII. figg. 26, ♂; 26 *a*, labium; 26 *b*, maxilla and maxillary palpus; 26 *c*, abdomen.)

Elongate, subparallel, black or dark brown (the humeri or sometimes the entire elytra paler), and shining when denuded of pubescence, the latter exceedingly dense and closely appressed and variable in colour—usually dark brown or coppery-brown, but sometimes lighter or even variegate, owing to an admixture of yellowish-white pubescence; the head usually with the sides and a central line yellowish-white; the prothorax with a narrow sinuous line at the sides, enclosing a brown spot anteriorly, two small oblique spots in the middle behind, and a median line in front whitish or yellowish-white; the scutellum whitish; the elytra each with an oblique spot on the disc before the middle, the suture very narrowly in some specimens, the lateral margins, and a large oblique H-shaped mark, confluent at the suture close to the apex, white or yellowish-white (a line of this colour extending along the suture to the apex and there confluent with the lateral stripe, thus enclosing an oblique patch, the oblique spot on the disc usually connected with the lateral stripe). Head moderately large, with only a few scattered punctures (almost smooth when denuded of pubescence); eyes (♂ ♀) small, distant from the base of the head, very widely separated, feebly emarginate, finely granulated; antennæ (♂ ♀) thickly pubescent, rather short, varying in colour from piceous-brown to testaceous, moderately slender, thickening outwardly, joint 2 short, rather more than half the length of 3, 3–10 gradually decreasing in length and increasing in width, 10 as broad as long, 11 considerably longer and stouter than 10, ovate, acuminate; prothorax a little narrower than the

head, about as long as broad, the sides dilated in front, compressed behind this, and thence to the base parallel or very slightly converging, the base feebly sinuate on either side, the disc with a short, deep, oblique impression on each side near the base, the impressions confluent behind (in some specimens forming a deep transverse pit, and filled with whitish pubescence), the surface closely and finely punctured; elytra long and subparallel, widest beyond the middle, about twice as wide as the prothorax, broadly transversely depressed below the base, very closely and finely punctured; beneath black, densely pubescent; legs varying in colour from piceous-brown to testaceous, long and slender, the tibiæ almost straight, the hind femora simple (but a little stouter in the male than in the female); the hind tibiæ feebly dilated on the inner side before the middle in the male.

Length $2\frac{1}{4}$–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. GUATEMALA, Quiche Mountains 7000 to 9000 feet (*Champion*).

Numerous examples of both sexes of this handsome species were beaten from the branches of oak-trees on the mountain-slope above the village of Chimente, in the Los Altos region of Guatemala. Allied to *X. argentatus* and *X. suturalis*, but differing greatly from either. The species may be at once known from all others of the genus by the elytra each having an oblique white or yellowish-white streak on the disc and a large similarly-coloured oblique **H**-shaped mark near the apex, the inner portion of the latter curved inwards behind and confluent with the corresponding portion of the one on the opposite elytron at the suture. In one female specimen the brownish pubescence of the elytra is paler and the white marks are edged with dark brown. The colour of the legs and antennæ is variable, as is also that of the darker portion of the elytral pubescence. The eyes are almost entire. In one abraded, apparently immature, example the head and thorax are quite black, the elytra, legs, and antennæ are testaceous, and the head is shining, smooth, and almost impunctate.

X. anthicoides much resembles an *Anthicus*.

35. **Xylophilus stigmosus.** (Tab. VIII. fig. 27.)

Broad, rather short, opaque, brownish-testaceous, densely clothed with fine, silky, closely appressed pubescence; the head, except in front, piceous-brown, the eyes black; the prothorax with a narrowly separated reddish-brown triangular patch on each side of the middle of the disc, for the rest clothed with whitish pubescence; the scutellum whitish; the elytra with a rather large oblong dark brown spot on either side of the suture at the base and a broad similarly-coloured zigzag fascia just below the middle (extending nearly to the lateral margin), for the rest clothed with whitish pubescence. Head large and broad, finely and rather sparsely punctured; eyes small and prominent, entire, rather finely granulated, very widely separated, distant from the base of the head, the sides of the latter obliquely converging behind them; antennæ testaceous, clothed with long hairs, long and slender, the apical three joints stouter, joint 2 stouter and only a little shorter than 3, 3–8 elongate and subequal, 9 and 10 wider, much longer than broad, 11 longer and stouter than 10, ovate, acuminate; prothorax broader than long, a little narrower than the head, somewhat flattened on the disc, the sides dilated in front, compressed behind this, and thence to the base almost straight, the base feebly sinuate on either side, the surface closely and finely punctured; elytra at the base about one half broader than the prothorax, gradually widening to beyond the middle, the sides a little rounded behind but straight in front, broadly transversely depressed below the base, closely and finely punctured; beneath piceous-brown, densely pubescent; legs long and slender, fusco-testaceous, the hind femora little darker, the tibiæ almost straight.

Length $1\frac{1}{2}$ millim.

Hab. GUATEMALA, San Lucas Toliman 5000 feet (*Champion*).

One example, probably a female. This small species has the eyes quite unemarginate and distant from the base of the head, and in this respect it resembles an *Anthicus* (the eyes, however, are transverse, and not oval as in *Anthicus*); the thorax is broader than long and a little dilated at the sides in front; the antennæ are long and slender, with the second joint very little shorter than the third and the apical three joints stouter than the preceding ones; the elytra are comparatively broad and short, widened from the base to beyond the middle, and have a spot on either side of the suture at the base and broad zigzag fascia just beyond the middle.

36. **Xylophilus tantillus.** (Tab. VIII. fig. 28, ♂.)

Short and rather broad, opaque, densely clothed with fine, silky, appressed, ashy pubescence; the head black; the prothorax and scutellum ferruginous; the elytra brownish-testaceous, with a rather broad angulated black fascia below the middle, the fascia not quite reaching the suture, and connected laterally with a marginal brownish stripe (not visible from above) which extends from the fascia upwards to the base. Head very large and broad, densely and finely punctured; eyes (♂) very finely pubescent, very large, occupying the whole of the side of the head (the head not at all extended behind them), rather narrowly separated, coarsely granulated, somewhat feebly emarginate; antennæ (♂) long and pubescent, piceous-brown, the two basal joints lighter, joints 1–3 slender and shining, 4–11 stout, equal in width, and opaque, 2 and 3 very short and equal in length, 4 more than twice as long as, and very much stouter than, 3, 4–10 subequal, 11 considerably longer than 10, ovate, acuminate; prothorax transverse, much narrower than the head, the sides rounded and converging in front, straight behind, the surface very densely and somewhat roughly punctured; elytra rather broad, much wider than the prothorax, widest at the middle, the sides straight in front, the surface very closely and finely punctured; beneath, the prothorax excepted, piceous; the legs (including the femora) very slender, rather short, testaceous, the apical half of the tibiæ infuscate.

Length 1½ millim. (♂.)

Hab. GUATEMALA, San Gerónimo (*Champion*).

One male example. This minute species belongs to the section *Aderus*, Westw., it having the second and third joints of the antennæ very short and equal in length. *Aderus* contains one European species, *A. boleti* (Marsh.)=*populneus*, Panz., this being a very much larger insect than *X. tantillus*; and the Japanese *X. gibbulus*, Mars., also belongs to it*.

Fam. ANTHICIDÆ.

Leconte and Horn [Class. Col. N. Am. p. 409 (1883)] include the "Pédilides" (less *Scraptia* and its allies) and the "Anthicides" of Lacordaire in one family, Anthicidæ: this arrangement is here adopted, with the exception that their "Xylophilini" are excluded. This is a family more numerously represented in temperate than in tropical regions; we have, however, to enumerate a large number of species from Central America, whence two only have hitherto been recorded. We have as yet received very little material from the sea-coast, or from the interior of Northern Mexico.

* Since my remarks on the genus were written (*anteà*, p. 166), I have found a single specimen of a *Xylophilus* in Herr Höge's Mexican collection; it is a male of an undescribed species allied to *X. bicolor*.

Group PEDILIDES.

So far as at present known, this group is represented in Central America by three genera—*Eurygenius*, *Bactrocerus*, and *Macratria*. *Pedilus* (=*Corphyra*, Lec.) is almost certain to be found eventually in Northern Mexico.

EURYGENIUS.

Eurygenius, La Ferté, Monogr. Anthic. p. 1 (1846); Lacordaire, Gen. Col. v. p. 578.
Ichthydion (Haldeman), Dej. Cat. 3rd edit. p. 223.
? *Ictistygna*, Pascoe, Journ. Ent. ii. p. 491 (1866) (apud Leconte, Proc. Ac. Phil. 1873, p. 335).

Six species of *Eurygenius* have been described, five from North America and one from Brazil, the genus ranging as far north as Vancouver. A large number of closely allied forms inhabit Australia.

* *Pubescence long and coarse, on the elytra forming spots; punctuation coarse; anterior constriction of the thorax not well defined on the disc.*

1. **Eurygenius mexicanus.** (Tab. IX. figg. 1, ♀; 2, fifth ventral segment, ♂.)

Black or brownish-black, the elytra (the scutellar region excepted) and the front of the prothorax piceous-brown or dark castaneous, somewhat thickly clothed with long, greyish, coarse, decumbent pubescence, and with a few scattered semierect bristly hairs, the pubescence forming a median line on the prothorax and numerous spots on the elytra. Head densely, roughly, and irregularly punctured, obsoletely canaliculate behind; eyes large and prominent, rather coarsely granulated, scarcely at all emarginate in front; antennæ piceous or piceous-brown, slender, joint 3 much longer than 2, joints 3 and 4 subequal, 5–10 decreasing in length but gradually increasing in width, 8–10 obconic, 11 a little longer than 10; prothorax moderately convex, about as long as broad, the sides broadly rounded at the middle, gradually converging behind, and constricted (but not abruptly) before the apex, the disc transversely depressed in front and canaliculate thence to the base, the base rather deeply grooved within on either side laterally, the sculpture consisting of closely packed, more or less confluent, very short, sinuous or curved raised lines, which are longitudinally or obliquely arranged (the surface appearing vermiculate), the apical portion with umbilicated punctures; elytra impressed with exceedingly coarse, deep, oblong, closely placed punctures (which are here and there confluent) to about the middle, the punctuation thence to the apex abruptly becoming very much finer, shallower, and closer, the interstices more or less granular on the apical half; beneath very densely punctured and pubescent, the ventral segments 3–5 smooth in the middle behind in the male; legs coarsely and roughly punctured, thickly clothed with bristly whitish hairs, piceous, the base of the femora, the tibiæ in great part, and the basal joint of the tarsi more or less reddish.

♂. Fifth ventral segment extended on either side posteriorly into a long and broad spoon-shaped lobe, the inner margin of which is densely fringed with hairs (fig. 2); the same segment in the female largely depressed in the middle behind.

Length 6–10½ millim. (♂ ♀.)

Hab. Mexico, Durango city, Chilpancingo and Iguala in Guerrero (*Höge*), Mescala in Guerrero, Puente de Ixtla in Morelos (*H. H. Smith*), Cordova (*Sallé*).

Eight examples. The peculiar sculpture of the elytra and other particulars separate *E. mexicanus* from all the N.-American species and from the Brazilian *E. reichei*, La Ferté. The pubescence is long and coarse, and decumbent, the upper surface also with scattered semierect bristly hairs. In the almost unemarginate eyes, form of

pubescence, &c. it agrees very nearly with Leconte's description of *E. murinus*, an insect inhabiting Georgia and Alabama.

2. **Eurygenius lanuginosus.** (Tab. IX. fig. 3, ♂.)

Brownish-black, the front of the head and the elytra obscure castaneous, thickly clothed with long, coarse, decumbent whitish pubescence, amongst which arise very many long, semierect, similarly-coloured bristly hairs, the decumbent pubescence on the elytra here and there forming rather large spots, the head and prothorax opaque, the elytra shining. Head very densely and moderately coarsely punctured, canaliculate behind; eyes large, prominent, coarsely granulated, unemarginate in front; antennæ testaceous, moderately slender, joint 3 much longer than 2, joints 8–10 comparatively elongate, not much widened towards their apex (11 missing); prothorax not very convex, about as long as broad, the sides broadly rounded before the middle, almost straight behind, and rather abruptly constricted before the apex, the disc transversely depressed in front and canaliculate thence to the base, the base grooved within on either side laterally, the surface very densely but not coarsely punctured (the sculpture much hidden by the pubescence); elytra impressed with deep, coarse, closely placed, oblong punctures (which are here and there confluent), the punctures gradually becoming finer and more shallow towards the apex, those on the apical portion of the disc finer and more scattered than those at the sides; beneath densely and finely punctured and thickly pubescent; legs coarsely and roughly punctured, thickly clothed with very long bristly whitish hairs, piceous, the base of the femora and the tibiæ in great part reddish-brown; fifth ventral segment broadly semicircularly emarginate, the sides not produced, in the male.

Length $8\frac{1}{2}$ millim. (♂.)

Hab. Mexico, Cordova (*Sallé*).

One male example. The differently sculptured thorax and elytra (the punctures on the latter becoming gradually, not abruptly, finer beyond the middle, and also less close on this part), the testaceous antennæ, the more numerous and much longer semierect hairs (in addition to the still coarser decumbent pubescence) of the upper surface, and the shape of the fifth ventral segment in the male distinguish this insect at once from *E. mexicanus*. The Californian *E. constrictus*, Lec., is a closely allied species; but, to judge from the brief description, *E. lanuginosus* is quite distinct from it.

3. **Eurygenius crinitus.**

Brownish-black, the elytra brown with a slight coppery lustre, the entire upper surface clothed with rather long, ashy, decumbent pubescence, amongst which arise longer semierect hairs, the decumbent pubescence on the elytra here and there forming spots, the head and prothorax opaque, the elytra shining. Head very densely but not very coarsely punctured, distinctly canaliculate; eyes large and prominent, not very coarsely granulated, almost unemarginate in front; antennæ piceo-testaceous, moderately slender, joint 3 considerably longer than 2, 8–10 very little widened towards their apex, 11 one and a half times the length of 10; prothorax not longer than broad, somewhat flattened on the disc, the sides broadly rounded, converging behind, and feebly constricted immediately before the apex, the disc with a fine smooth central line from the base nearly to the apex, and shallowly transversely depressed in front, the surface densely and confluently punctured; elytra very closely and coarsely punctured, the punctures gradually becoming finer towards the apex; beneath piceous-brown, shining, coarsely pubescent, thickly and coarsely punctured, the venter and the middle of the metasternum much more sparsely so; legs coarsely and roughly punctured, clothed with long bristly whitish hairs, piceous, the base of the femora and the tibiæ in great part reddish.

Length $6\frac{1}{2}$ millim. (♀.)

Hab. Guatemala, Yzabal (*Sallé*).

One specimen. This species has the elytra more uniformly punctured than in *E. mexicanus* or *E. lanuginosus*. It nearly agrees with *E. mexicanus* in the form of pubescence; but differs from it in the more filiform antennæ, and in the less marked anterior constriction and finer sculpture of the thorax. Apparently allied to the N.-American *E. murinus*.

4. **Eurygenius horridus.**

Very elongate, blackish-brown or piceo-castaneous, the sides, suture, and base of the elytra castaneous in one example, the upper surface thickly clothed with long, coarse, greyish decumbent pubescence and very long erect bristly hairs, the pubescence on the elytra here and there forming spots. Head densely and rugosely punctured; eyes very large, almost entire; antennæ ferruginous; prothorax longer than broad, the sides rounded before the middle, slightly converging and almost straight behind, and constricted just before the apex, the surface sculptured much as in *E. mexicanus*, but less coarsely vermiculate, the disc with a very distinct smooth central line; elytra rather shining, very elongate, impressed with coarse, deep, closely placed punctures, which become finer towards the apex; legs fusco-ferruginous, coarsely and roughly punctured, and thickly clothed with very long bristly hairs; fifth ventral segment triangularly depressed in the middle behind and the apex truncate in the male.

Length 9 millim. (♂.)

Hab. Mexico, Villa Lerdo in Durango (*Höge*).

Two male examples. In this insect the pubescence is longer and coarser and the erect hairs are more numerous than in either of the other species described here. More elongate than *E. lanuginosus*, the punctuation of the elytra less coarse at the sides and base.

*** Pubescence short, fine, and silky, uniform; punctuation fine; anterior constriction of the thorax very sharply defined on the disc.*

5. **Eurygenius uniformis.** (Tab. IX. fig. 4, ♂.)

Narrowly elongate, subopaque; reddish-testaceous, the prothorax suffused with piceous-brown, the elytra piceous-brown, with the suture and lateral margins, and an ill-defined stripe extending from the shoulders downwards, testaceous; the entire surface sparsely clothed with short, fine, silky, appressed pubescence. Head densely and finely punctured (the punctures umbilicate in form), obsoletely canaliculate behind, the neck very narrow; eyes comparatively small, not prominent, coarsely granulated, moderately emarginate in front, black, distant from the base of the head; antennæ very long, fully reaching to the middle of the elytra, filiform, testaceous, joints 6–11 slightly infuscate, 11 a little longer than 10; prothorax longer than broad, convex, broadest before the middle, the sides much rounded anteriorly, constricted at the middle and thence to the base almost straight, and very abruptly constricted just before the apex, the apical constriction connected with a deep groove which extends across the disc and forms a short and very distinct neck, the disc obsoletely canaliculate (distinctly so before the apical constriction), the basilar groove extending completely across, the surface very densely and finely punctured; elytra densely and finely punctured, the punctures becoming coarser towards the base and finer and shallower towards the apex; beneath densely punctured and pubescent, testaceous, the venter in great part piceous; legs and palpi reddish-testaceous, the former finely and densely punctured and clothed with short silky pubescence.

Length 5 millim. (♂.)

Hab. Guatemala, San Gerónimo (*Champion*).

The finer and denser punctuation, short and non-variegate silky pubescence (without

longer and more erect intermixed hairs), smaller eyes, longer antennæ, narrower neck, small size, &c. distinguish this species at a glance from the others of the genus here described. The apical joint of the maxillary palpi is also longer, and approaches that of *Stereopalpus*; but the shape is more triangular than cultriform (as exhibited in *S. mellyi*, La Ferté, the type of the genus *Stereopalpus*), and the insect in this respect agrees better with *Eurygenius*. In the finely punctured elytra &c. *E. uniformis* approaches the Californian *Stereopalpus pruinosus*, Lec.; from which, to judge from the description, it differs in the sharply defined anterior constriction of the thorax, longer antennæ, small size, &c., as well as in the more dilated apical joint of the maxillary palpi. The legs are less coarsely punctured and more slender than in the preceding species.

BACTROCERUS.

Bactrocerus, Leconte, New Species Col. p. 143 (1866); Leconte & Horn, Class. Col. N. Am. p. 410 (1883).

The single known species of *Bactrocerus* is from Cape San Lucas, Lower California; the one from the Pacific slope of Guatemala now added agrees well with Leconte's definition of the genus, which may be readily distinguished from *Stereopalpus* and *Eurygenius* by the long apical joint of the antennæ (more especially in the male sex) and the short broad apical joint of the maxillary palpi. The description of Leconte was, no doubt, based upon male examples only.

1. **Bactrocerus fasciculatus.** (Tab. IX. figg. 5, ♂; 6, ♀.)

Piceous- or reddish-brown, the prothorax usually a little darker, thickly clothed with coarse brownish or white appressed pubescence, the pubescence on the elytra here and there forming spots. Head densely and roughly punctured, finely canaliculate in the middle behind; eyes large, prominent, rather coarsely granulated, moderately emarginate in front; antennæ slender, widening a little outwardly, joints 1–5 piceous, the base and apex of each more or less testaceous, 6–10 black, 11 testaceous or flavo-testaceous, the latter slightly constricted at the middle in both sexes—in the male about three times, in the female twice, the length of the tenth; prothorax much longer than broad, not very convex, a little flattened on the disc, the sides rounded just before the middle (the prothorax as wide here as at the base), moderately constricted behind, and rather feebly (not abruptly) constricted before the apex, the disc transversely depressed in front and shallowly canaliculate (the pubescence appearing to be obliquely combed off on either side of a median line), the basilar groove distinct only at the sides, the surface densely and coarsely punctured (the punctuation hidden by the pubescence); elytra very much wider than the prothorax, very coarsely and deeply punctured, the punctuation becoming still coarser and deeper towards the base, finer and closer towards the apex, and here and there confluent, the minute interspaces almost granular at the apex; beneath densely punctured and thickly pubescent; legs coarsely and roughly punctured and thickly clothed with bristly hairs, piceous, the base and apex of the femora, the basal half of the tibiæ, and the base of the first joint of all the tarsi more or less reddish-brown; fifth ventral segment in the male transversely depressed in the middle behind, unemarginate.

Length ♂ 5–5½, ♀ 8½–9 millim.

Hab. Guatemala, El Tumbador 2500 feet, Cerro Zunil 4000 feet (*Champion*).

Three male and two female examples.

From *B. concolor*, Lec., this species may be at once distinguished by the shorter

apical joint of the antennæ (in *B. concolor* equal to the preceding four joints united), more distinctly emarginate eyes, the rather feeble and not abrupt anterior constriction of the thorax, and fasciculate elytral pubescence. The apical joint of the maxillary palpi is broad and subtriangular, the apical side rather longer than the inner side. The colour of the pubescence is variable. The specimens obtained exhibit a very great disparity in size, the males (as in some Œdemeridæ) being very much smaller than the females.

MACRATRIA.

Macratria, Newman, Ent. Mag. v. p. 377 (1838); Lacordaire, Gen. Col. v. p. 579; Gemminger & Harold, Cat. Col. vii. p. 2082.

Macrarthria, Erichson, Archiv für Naturg. 1840, 2, p. 307.

Macrarthrius, La Ferté, Monogr. Anthic. p. 11 (1848).

Twenty-nine* species of this very widely distributed genus have been described, chiefly from the warmer parts of the globe; eleven are here recorded from Central America. These latter are so closely allied that they are exceedingly difficult to discriminate; this cannot always be satisfactorily done till the sex of the individual under examination is ascertained. In some species the apical joint of the antennæ is much longer in the male than in the female, while in others it is of equal length in both sexes. The form of the terminal segments (dorsal and ventral) of the hind body often affords a good distinguishing character, more especially in the female sex. In the male the fifth segment (dorsal and ventral) is usually more or less broadly truncate (also emarginate in some species) at the apex; in the female it is longer, with the apex of the dorsal portion rounded or produced in the middle and at the sides. In the female of *M. incana* the apex of the fifth dorsal segment† has not only a long horizontal projecting piece in the middle (resembling the œdeagus of the male), but the sides are also angularly produced. In the female of *M. princeps* the fifth dorsal segment is divided down the centre, and beyond this a long projecting piece from the middle of the sixth segment (similar to that of the fifth in *M. incana* &c.) is visible. Our material is not sufficient to enable me to examine these parts in all the different species; *M. princeps* exhibits, however, a very different structure from that of the other members of the genus. The importance of the sexual characters in this genus has been almost entirely overlooked by recent authors, and in the descriptions of many of the eastern *Macratriæ* no mention whatever is made of the sex of the individuals described; the males of some of these latter have the anterior tibiæ dilated. As in *Eurygenius* and *Bactrocerus*, the eyes are clothed with short hairs. The following table will assist in the identification of the Central-American forms:—

* *M. gigas*, Mars., from Japan, has nothing to do with *Macratria*: it is a typical *Stereopalpus*.

† The corresponding segment to the fifth ventral: it is really the sixth, an additional segment being visible on the dorsal side at the base.

Head large, subtriangular, the post-ocular portion narrow; elytra with obsolete rows of punctures . . . . . *princeps.*

Head smaller and more ovate, the post-ocular portion broad and laterally rounded; elytra with serial rows of punctures.

Elytra narrowing from the middle, very densely pubescent; legs stout; antennæ with the apical joint a little longer than the tenth.

Thorax strongly rounded anteriorly, distinctly wider than the head . . *canescens.*

Thorax only moderately rounded anteriorly, longer and more parallel, not or scarcely wider than the head.

Occipital channel shallow; fifth dorsal segment rounded at the apex in the female . . . . . *incana.*

Occipital channel deep; fifth dorsal segment tridentate at the apex in the female . . . . . *tropicalis.*

Elytra parallel, less densely pubescent; legs more slender; antennæ with the apical joint longer, in some species very elongate in the male.

Antennæ slender; apical joint longer in the male than in the female—in the male at least three times, in the female twice, the length of the tenth.

Head densely punctured . . . . . *parallela.*

Head quite sparsely punctured . . . . . *nitidiceps.*

Antennæ slender; apical joint longer in the male than in the female—in the male two and a half times, in the female not twice, the length of the tenth . . . . . *rufifrons.*

Antennæ slender; apical joint similar in both sexes, not twice the length of the tenth . . . . . *guatemalena.*

Antennæ stout; apical joint twice the length of the tenth in the male (female unknown) . . . . . *crassicornis.*

Head rather small, the post-ocular portion broad and laterally subangular; elytra without serial rows of punctures; antennæ with the apical joint rather more than twice the length of the tenth (in the male) . . . *obsoleta.*

Head rather small, the post-ocular portion broad, obliquely converging from the eyes; elytra with serial rows of punctures; antennæ with the apical joint twice the length of the tenth . . . . . *nigricornis.*

1. **Macratria princeps.** (Tab. IX. figg. 7, ♀; 7 *a*, sixth ventral segment, ♀; 7 *b*, ditto, from above.)

Fusco-ferruginous, the prothorax and elytra sometimes of a more olivaceous tint, very densely clothed with brownish or ashy pubescence, and with long, erect, scattered hairs, those on the elytra serially arranged. Head large, subtriangular, very broad behind, the post-ocular space narrow, very densely and finely punctured, the occipital channel deep and extending upwards; eyes large, oblique, converging in front, rather prominent, very coarsely granulated; palpi ferruginous; antennæ rather short, ferruginous, joint 3 much longer than 2, joints 4–8 about equal in length, 9 and 10 triangular, and each wider and much longer than 8, 11 a little longer than 10 and acuminate; prothorax convex, about one third longer than broad, distinctly wider than the head, the sides much rounded anteriorly and converging behind, the groove on either side of the base shallow, the flanks somewhat hollowed, the surface densely and

confluently punctured; elytra subparallel in their basal half, and thence very gradually narrowing to the apex, very densely and minutely punctured, with indistinct irregular rows of coarser punctures on the disc extending from the base to beyond the middle (the punctures separated from each other by somewhat granular elevations) and a fine sharp raised line extending from the shoulders nearly to the apex, the sculpture becoming a little coarser and more granular towards the base, the apices sharp; beneath ferruginous, the meso- and metasternum darker, very densely punctured and pubescent; legs (including the tarsi) very stout, the femora much thickened outwardly, ferruginous, the tibiæ darker at the base; the first joint of the front and middle tarsi exceedingly stout, concave beneath, that of the hind pair stout and longer than the following joints united.

♀. Fifth dorsal segment divided in the centre from the base to the apex; sixth ventral segment at the apex in the middle with a lanciform projecting piece which is fringed with hairs at the tip (fig. 7 *a*), this segment also furnished on either side behind with a long and narrow chitinous converging appendage, the tip of the latter abruptly truncate and ciliate, and meeting the apex of the opposite one above the central piece (fig. 7 *b*).

Length 5½–7 millim. (♀.)

Hab. Mexico, Ventanas in Durango (*Forrer*); Guatemala, Panzos (*Champion*).

Two specimens from Panzos and one from Ventanas, all females. These examples agree so nearly with La Ferté's description and figures of *M. goudotii* from Colombia (which is based upon a single male example), that I, at first, identified them with it; there is, however, in Mr. F. Bates's collection a male example, from Ega, of a *Macratria* which agrees still more closely with La Ferté's figure; this last-mentioned specimen has the apices of the elytra separately rounded (the form of the sutural angle is, unfortunately, not mentioned in the description), while in *M. princeps* they are rather sharp*. If this determination is correct, *M. princeps* differs from *M. goudotii* not only in this respect, but in its more robust form, rather longer apical joint of the antennæ, stouter and more ferruginous legs, wider thorax, and still more coarsely granulated eyes. The lanciform projection at the apex of the terminal segment of the female, at first sight, resembles the central sheath of the œdeagus of the male, for which it might easily be mistaken. The short, broad head, large, oblique, and very coarsely granulated eyes, stout legs (the tarsi included), comparatively broad form, large size, &c. separate *M. princeps* from all the following species. The irregular rows of punctures on the elytra are scarcely distinguishable through the pubescence, and the punctures are separated one from another by somewhat granular elevations which become coarser towards the base. The thorax has the flanks somewhat hollowed out, the lateral limits being more sharply marked than in any of our other species, except *M. canescens*. The Mexican example is much larger than those from Guatemala.

2. Macratria canescens.

Black, the head reddish in front, the labrum paler, subopaque, very densely clothed with yellowish-grey silky pubescence, and with scattered erect hairs. Head moderately large, very densely and somewhat roughly punctured, slightly shining, the space behind the eyes broad and rounded laterally, the occipital channel short but distinct; eyes comparatively small, moderately prominent, not very coarsely granulated; palpi

* As the Cuban *M. insularis* seems to be chiefly distinguished by the acuminate sutural angle, it is not likely that La Ferté could have overlooked a similar character in *M. goudotii*.

testaceous; antennæ (♀) testaceous, rather stout, joints 9 and 10 triangular, each very much wider than, and nearly twice as long as, 8, 11 about one third longer than 10 and pointed; prothorax distinctly wider than the head, one and a half times as long as broad, the sides much rounded anteriorly and strongly converging behind, the flanks concave (the lateral limits of the prothorax somewhat sharply defined), the basilar groove very deep and extending completely across, the surface very roughly and confluently punctured; elytra moderately long, comparatively broad, subparallel in their basal half, and thence narrowing to the apex, with irregular rows of fine but deep punctures extending from the base to far beyond the middle, and a fine longitudinal impressed line extending from the shoulders downwards, the interstices very densely and minutely punctured, and also with a few widely scattered punctures similar to those of the striæ, these punctures, however, more numerous along the suture and at the base, the apices rather sharp; legs stout (the femora much thickened towards the apex), the front and middle pairs testaceous with the base of the tibiæ and the femora in the middle above piceous, the hind pair piceous with the base and extreme apex of the femora reddish and the tips of the tarsi testaceous.

♀. Fifth dorsal segment furnished in the middle at the apex with a long slender projecting piece which is curved downwards, the apical margin somewhat angularly extended on either side laterally.

Length $5\frac{1}{2}$ millim. (♀.)

Hab. Mexico, Jalapa (*Höge*).

One male example. The longer, narrower, and more rounded head, the smaller and more finely granulated eyes, the deep basilar groove of the thorax, the very distinct rows of punctures on the elytra, the less elongate shape, &c. distinguish *M. canescens* from *M. princeps* and *M. goudotii*; and the larger head, shorter and broader thorax (the sides of which are much more rounded anteriorly, the flanks more hollowed, the basilar groove deeper, and the sculpture coarser), &c. separate it from *M. incana* and *M. tropicalis*. The elytra are shaped and sculptured as in these latter, from both of which it differs in the form of the fifth dorsal segment in the female: this segment is furnished with a long projecting piece in the middle as in *M. incana*, the apical margin, however, being less sharply produced on either side laterally.

3. **Macratria incana.** (Tab. IX. figg. 8, ♂; 8 *a*, fifth ventral segment, ♂; 8 *b*, sixth ventral segment, ♂; 8 *c*, œdeagus, ♂; 9, fifth ventral segment, ♀; 9 *a*, fifth dorsal segment, ♀.)

Black or pitchy-black, the head reddish or testaceous in front, the labrum paler, the disc of each elytron from just below the base to the apex usually indeterminately brownish (the suture broadly, the sides, and the extreme base remaining of the ground-colour), subopaque, very densely clothed with fine, silky, ashy or yellowish-grey pubescence, and with scattered erect hairs. Head very densely and finely punctured, rounded at the sides behind the eyes, the occipital channel shallow and not extending upwards; eyes moderately large, not prominent; antennæ rather slender, testaceous, with joints 7–10 and the basal half of 11 piceous or brownish (in some examples entirely testaceous), 3 only a little longer than 2, 9 and 10 triangular, each much longer and wider than 8, 11 in both sexes about half as long again as 10 and pointed; prothorax nearly twice as long as broad, not or very little wider than the head, the sides moderately rounded anteriorly and converging behind, the groove on either side of the base deep (in fresh specimens partly hidden by the pubescence), the surface very densely and roughly punctured; elytra subparallel in their basal half, and thence somewhat rapidly narrowing to the apex, with irregular rows of fine, rather deep, punctures extending from the base to far beyond the middle, and a fine longitudinal impressed line extending from the shoulders downwards, the interstices very densely and exceedingly minutely punctured, and also with a few very widely scattered punctures similar to those of the striæ, these punctures, however, more numerous along the suture and at the base, the apices rounded; beneath

coloured as above, very densely punctured and pubescent; legs stout (the femora much thickened towards the apex), the front and middle pairs flavo-testaceous or testaceous with the base of the tibiæ piceous and sometimes the apices of the femora brownish, the hind pair piceous or piceous-brown with the knees and the tips of the tarsi testaceous (in one example the four anterior femora are in great part piceous, in others the hind tibiæ are testaceous, except at the apex).

♂. Fifth ventral segment broadly truncate at the apex, the apical margin feebly bisinuate (fig. 8 *a*); the corresponding dorsal segment very shallowly and broadly emarginate at the apex.

♀. Fifth ventral segment deeply triangularly emarginate (fig. 9); the corresponding dorsal segment furnished with a projecting piece in the middle, and angularly extended on either side (the apical margin thus appearing tridentate) (fig. 9 *a*).

Length 4–5⅓ millim. (♂ ♀.)

Hab. MEXICO, Atoyac, Teapa (*H. H. Smith*); GUATEMALA, Teleman and San Gerónimo in Vera Paz (*Champion*).

Apparently not uncommon in South-eastern Mexico and Eastern Guatemala. This species is densely pubescent, and varies considerably in size, and also in the colour of the legs and antennæ. The less parallel shape, shorter apical joint of the antennæ, and still more finely punctured elytral interstices distinguish it easily from the N.-American *M. murina*. From the Colombian *M. sericea*, La Ferté (to judge from the description), it differs in the less parallel shape, the shorter third joint of the antennæ (it being only a little longer than the second), duller elytral interstices, &c. In the male the sixth ventral segment is furnished on either side with two long, straight, slender processes which are clothed with long hairs at the tip (fig. 8 *b*), the corresponding dorsal segment being divided down the middle into two pieces which are pointed and somewhat hooked at the end (the tips often visible beyond the end of the body in dried specimens *); and the central sheath of the œdeagus has an accompanying long, flattened piece on either side (forming part of the tubular piece enclosing the central sheath), the ends of which are abruptly truncate, bent inwards, and somewhat hooked within (fig. 8 *c*).

4. **Macratria tropicalis.**

Pitchy-black or obscure reddish-brown, the head paler in front, the disc of the elytra brownish; the occipital channel short and deep, not extending upwards; antennæ testaceous, formed as in *M. incana*; palpi testaceous; prothorax, elytra, and legs as in *M. incana*, the legs equally variable in colour; fifth dorsal segment arcuate-emarginate at the apex in the male, rounded and entire in the female.

Length 4⅓–5½ millim. (♂ ♀.)

Hab. GUATEMALA, Panzos (*Conradt*), Teleman (*Champion*).

One male from Teleman and two female examples from Panzos. Except for the different form of the fifth dorsal segment in the female, this insect is so closely allied to *M. incana* as to be scarcely separable from it; the occipital channel of the head is, however, deeper in both sexes. The single male, which is somewhat doubtfully referred to the same species, is much smaller in size, and has the antennæ more

* Similar projecting pieces are visible in one of the three dried male specimens of *M. murina* now before me.

slender, and the basilar groove of the thorax deeper. The apical joint of the antennæ is about half as long again as the tenth in both sexes.

5. **Macratria parallela.** (Tab. IX. fig. 10, ♂.)

Black, the head reddish in front, slightly shining, thickly clothed with rather coarse brownish pubescence and with scattered erect hairs. Head densely but not very finely punctured, somewhat rounded at the sides behind the eyes, the occipital channel short but distinct; eyes moderately large, not prominent; antennæ (♂) comparatively long, extending a little beyond the base of the prothorax, black, joints 1–4 and 11 at the extreme tip more or less testaceous, joints 2–8 slender, 3 distinctly longer and more slender than 2, 9 and 10 triangular and longer and wider than 8, 11 three and a half times as long as 10; prothorax about twice as long as broad, not wider than the head, the sides moderately rounded anteriorly and converging behind, the basilar groove deep and extending completely across, the surface very densely and roughly punctured; elytra subparallel (the sides, however, slightly converging from the base), with irregular rows of fine but deep punctures extending from the base to far beyond the middle and a fine longitudinal impressed line extending from the shoulders downwards, the interstices densely and somewhat roughly punctured, the base and sutural region impressed with coarser punctures (as coarse as those of the striæ), the apices rounded; beneath coloured as above, very densely punctured and pubescent; legs comparatively slender, rather long, the femora moderately clavate, piceous, the knees, the base of the femora, and the tarsi (except the basal joints of the hind pair) more or less reddish or testaceous; fifth dorsal segment truncate and emarginate in the male.

Length 5–5½ millim. (♂.)

Hab. Panama, Volcan de Chiriqui 4000 feet (*Champion*).

Three examples, all males. The duller and more densely and less finely punctured head distinguishes this species from the following, to which it is very closely allied; the much longer apical joint of the antennæ (in the male) and the denser punctuation of the head separate it from *M. rufifrons*.

6. **Macratria nitidiceps.**

Closely allied to and of the general form of *M. parallela*. The head indeterminately reddish or testaceous in front, less densely and more finely punctured, almost smooth behind, shining; the antennæ black, the three or four basal joints and the extreme tip of the apical one usually testaceous, sometimes with only the two basal joints lighter, joint 3 very little longer than 2, 9 and 10 triangular, longer and wider than 8, 11 in the male fully three times, in the female twice, as long as 10; the prothorax and elytra as in *M. parallela*; the legs in some specimens almost entirely piceous, in others testaceous or flavo-testaceous with the knees, tibiæ, and tarsi piceous-brown or brownish; the fifth ventral and fifth dorsal segments truncate at the apex in the male, rounded in the female.

Length 4½–5½ millim. (♂ ♀.)

Hab. Mexico, Coscomatepec, Juquila, Cordova (*Sallé*), Cerro de Plumas, Jalapa (*Höge*).

Numerous examples. In this insect the head is more sparsely and more finely punctured than in any other of the Central-American representatives of the genus.

7. **Macratria rufifrons.**

Closely allied to *M. parallela*, and differing as follows:—The head shining, less densely but somewhat coarsely punctured, the anterior half reddish; the antennæ black, with the four basal joints and the tip of the eleventh testaceous, joints 9 and 10 triangular, longer and wider than 8, 11 in the male two and a half

times, in the female not quite twice, the length of 10; prothorax, elytra, and legs as in *M. parallela*; fifth dorsal segment (♂) very broadly truncate at the apex.

Length 5–6 millim. (♂ ♀.)

Hab. GUATEMALA, San Gerónimo, Sinanja (*Champion*).

Two examples. Very closely allied to *M. parallela* and *M. nitidiceps*. The punctuation of the head is coarser and closer than in the latter, but not so dense as in the former; the apical joint of the antennæ in the male is shorter than in either of these species, it being only a little longer than in the female of *M. nitidiceps*.

8. **Macratria guatemalena.**

Black, the head reddish in front, the labrum testaceous, slightly shining, thickly clothed with brownish pubescence and with scattered erect hairs. Head densely and finely punctured, somewhat rounded at the sides behind the eyes, the occipital channel deep; eyes moderately large, not very prominent; palpi testaceous, the last joint of the maxillary pair sometimes darker; antennæ testaceous, with the three outer joints darker (in one example the tip of the eleventh only slightly infuscate), slender, joint 2 not much shorter than 3, joints 9 and 10 triangular and each much longer and wider than 8, 11 in both sexes nearly equal to 9 and 10 united; prothorax about one and a half times as long as broad, not wider than the head, the sides moderately rounded anteriorly and constricted behind, the groove on either side of the base deep, the surface very densely and roughly punctured; elytra parallel, with somewhat regular rows of fine but deep punctures extending from the base to far beyond the middle and a fine longitudinal impressed line extending from the shoulders downwards, the interstices densely and somewhat roughly punctured, the base and scutellar region impressed with coarser punctures (similar to those of the striæ), the apices rounded; legs rather long and slender, the femora moderately clavate, testaceous, with the knees and the base of the femora of the two anterior pairs and the hind pair in great part piceous; fifth dorsal segment (♂) truncate at the apex.

Length $4\frac{1}{3}$–5 millim. (♂ ♀.)

Hab. GUATEMALA, Cubilguitz, Capetillo (*Champion*).

Three examples. This insect closely resembles *M. parallela*, *M. nitidiceps*, and *M. rufifrons*, but differs from all these in the much shorter apical joint of the antennæ in the male; this joint is similarly formed in both sexes, and not quite twice the length of the preceding one. The female so closely resembles that sex of *M. rufifrons* that it can only be distinguished by the rather more densely punctured head and the darker anterior and middle legs. The description is taken from a pair from Cubilguitz; the single female from Capetillo has the five outer joints of the antennæ dark, and also differs in some other particulars.

The North-American *M. confusa*, Lec., is apparently an allied species.

9. **Macratria crassicornis.**

Black, the head dark reddish-brown, the labrum testaceous, rather shining, thickly clothed with fine, silky, brown pubescence and with scattered semierect hairs. Head thickly and rather coarsely punctured, somewhat rounded at the sides behind the eyes, the occipital channel short but deep; eyes moderately large, not very prominent; last joint of the maxillary palpi piceous, the other joints testaceous; antennæ (♂) entirely black, stout, gradually widening outwardly, joints 9 and 10 triangular and each considerably longer and wider than 8, 11 twice as long as 10 and pointed; prothorax one and a half times as long as broad, not wider than the head, the sides moderately rounded anteriorly and converging behind, the basilar

groove deep and extending completely across, the surface densely and roughly punctured; elytra long and parallel, with irregular rows of fine shallow punctures extending from the base to far beyond the middle and a fine longitudinal impressed line extending from the shoulders downwards, the interstices finely, densely, and somewhat roughly punctured, the apices rounded; beneath black, densely punctured and pubescent; legs rather long and slender, the femora moderately clavate, black, the apical joints of the tarsi testaceous; fifth ventral segment truncate and broadly and shallowly emarginate in the male.

Length $5\frac{3}{4}$ millim. (♂.)

Hab. Mexico, Jalapa (*Höge*).

One male example. Closely allied to *M. nigricornis*, and differing thus:—The head larger, rounded at the sides behind the eyes (not obliquely narrowing), and much less closely punctured; the antennæ stouter, the apical joint of the same length in the male; the elytra with more irregular series of punctures and the interstices more roughly and less densely punctured; the legs black. The stout and entirely black antennæ (the apical joint of which is much shorter in the male), the more thickly and less finely punctured head, and the more finely punctured elytra (the punctures of the series being much shallower), separate it from *M. nitidiceps* &c.

10. **Macratria obsoleta.** (Tab. IX. fig. 11, ♂.)

Black, the head reddish-testaceous in front, the labrum pale flavous, thickly clothed with brownish pubescence, the head and prothorax also with long erect hairs, shining (when denuded of pubescence). Head comparatively long, somewhat angularly dilated on either side behind the eyes, the post-ocular portion broad, finely and thickly punctured, the occipital channel quite shallow; eyes moderately large, not very prominent, converging in front; palpi testaceous; antennæ (♂) comparatively long and slender, black, joints 1–4 more or less testaceous, 9 and 10 triangular, each wider and much longer than 8, 11 rather more than twice the length of 10 and acuminate; prothorax about one third longer than broad, a little wider than the head, the sides moderately rounded anteriorly and converging behind, the groove on either side of the base deep but not extending inwards, the surface densely punctured; elytra subparallel, thickly, roughly, and confusedly punctured, with a fine sharp groove extending from the shoulders nearly to the apex, the disc without trace of rows of coarser punctures or irregular rows of granular elevations, the interspaces smooth and shining, the apices rounded; legs slender, comparatively long (the tarsi especially), the femora clavate beyond the middle, testaceous, the outer half of the hind femora, all the tibiæ at the base, and the basal joint of all the tarsi piceous, the intermediate femora also darker towards the apex; the basal joint of the hind tarsi much longer than the following joints united; fifth dorsal and fifth ventral segments (♂) truncate at the apex.

Length 5 millim. (♂.)

Hab. Costa Rica, Volcan de Irazu 6000 feet (*Rogers*).

One male example. This species differs from all others of the genus here enumerated in the elytra being confusedly punctured, without trace of irregular rows of punctures or of granular elevations on the disc. The groove on either side of the base of the thorax is not extended inwards so as to meet the opposite one at the middle (as in the allied species), these being widely separated in *M. obsoleta*. The head is somewhat angularly dilated at the sides behind the eyes, not rounded.

11. **Macratria nigricornis.** (Tab. IX. fig. 12.)

Black, the anterior part of the head (and the labrum) broadly and abruptly flavo-testaceous, subopaque, thickly clothed with fine, silky, brownish pubescence and with scattered erect hairs. Head rather long and narrow, very densely and very finely punctured, obliquely narrowed behind the eyes, the occipital channel short but deep; eyes moderately large, rather prominent; last joint of the maxillary palpi piceous or black, and sometimes the other joints also; antennæ black (the basal joint testaceous beneath in one example), comparatively stout, gradually widening outwardly, joints 9 and 10 triangular and each considerably longer and wider than 8, 11 twice as long as 10 and pointed; prothorax at least one and a half times as long as broad, very little wider than the head, the sides moderately rounded anteriorly and converging behind, the basilar groove deep, the surface densely, roughly, and confluently punctured; elytra parallel, with somewhat regular rows of fine shallow punctures extending from the base to far beyond the middle and a fine longitudinal impressed line extending from the shoulders downwards, the interstices very densely and exceedingly minutely punctured, the sutural one with scattered punctures like those of the striæ, the apices rounded; legs slender, but with the femora strongly clavate, black, the femora broadly testaceous in the middle (the base and apex only black); fifth dorsal and fifth ventral segments slightly truncate, and the latter emarginate, in the male.

Length $4\frac{2}{3}$–$5\frac{1}{2}$ millim. (♂.)

Hab. Mexico, Coscomatepec (*Sallé*); Guatemala, Chacoj (*Champion*); Nicaragua, Chontales (*Belt*).

Four examples, two of which are certainly of the male sex. This species differs from the allied forms in the head being obliquely narrowed behind the eyes. The antennæ are black, comparatively stout (the intermediate joints becoming gradually wider, so that the transition from the eighth to the ninth is not very abrupt), and the eleventh joint in both sexes is as long as 9 and 10 united. The interstices of the elytra are more minutely and much more densely punctured than in *M. nitidiceps*, from which it also differs in the denser punctuation and colour of the head. The coloration of the legs is apparently constant.

Group **ANTHICIDES.**

The genera *Notoxus* and *Anthicus* are both well represented in Central America, and when the Central-American coast-region is more thoroughly investigated additional species of each genus are certain to be discovered. *Tanarthrus*, Lec., should occur in Northern Mexico; the three known species are from the Colorado Desert and Utah: they are said to fly and run on salt mud, after the manner of a *Cicindela*.

NOTOXUS.

Notoxus, Geoffroy, Hist. Ins. envir. Paris, p. 356 (1762); La Ferté, Monogr. Anthic. p. 21; Lacordaire, Gen. Col. v. p. 594; Horn, Trans. Am. Ent. Soc. xi. p. 165 (1884).

Monocerus, Dejean, Cat. 3rd edit. p. 237.

Ceratoderus, Blanchard, Hist. des Ins. ii. p. 40 (1845) (nec Westwood, Mulsant).

Species of this remarkable genus inhabit most parts of the world. Fourteen are

known from America north of Mexico, two from the northern part of South America, and one from the Antilles *. Sixteen are now recorded from Central America, eight of which appear to be peculiar to Mexico. We follow, as nearly as possible, the arrangement adopted by Dr. Horn in his excellent monograph of the North-American species (*op. cit.*). As this author remarks, the elytral markings are often variable and not always to be relied upon as specific characters unless supported by other marks of distinction. Important characters exist in some species in the form of the apices of the elytra (not only in the male but in the female also) and also in that of the fifth ventral segment (in the male). We have, unfortunately, very insufficient material of several of the species (more particularly of the Mexican ones), in some cases one sex only being represented; so that we are unable to describe the sexual marks of distinction in *N. opacus*, *N. ventralis*, *N. fraternus*, *N. truncatipennis*, *N. crucifer*, &c.

Various Nearctic and Palæarctic species (*N. monoceros*, Linn., *N. anchora*, Hentz, &c.) have the sutural angles of the elytra in the male retracted and the apices obliquely truncate and more or less spinous externally; none of the Central-American species of which the males are known possess this peculiarity. *N. acuminatus* is remarkable from having the apices of the elytra subacuminate in both sexes.

These insects are chiefly found in sandy places, not only upon the ground, but upon low herbage and bushes.

The Central-American species may be grouped thus:—

Elytra with fine or moderately coarse decumbent pubescence, sometimes with scattered, longer, serially arranged, decumbent or erect hairs; apices conjointly rounded in both sexes, or separately rounded in the male, or truncate in the female.	
Surface unicolorous black and opaque (the prothorax, the horn excepted, reddish-testaceous); post-humeral depression obsolete .	Species 1, 2.
Surface fasciate.	
Post-humeral depression deep in both sexes; surface shining or slightly shining	Species 3, 4.
Post-humeral depression moderately deep; surface opaque	Species 5.
Post-humeral depression shallow; surface shining	Species 6–9.
Elytra with fine decumbent pubescence and long, scattered, erect hairs; post-humeral depression deep in both sexes; apices subacuminate .	Species 10.
Elytra with coarse decumbent pubescence and numerous long erect hairs; post-humeral depression more or less distinct; apices conjointly rounded or slightly produced	Species 11–16.

* *N. bipunctatus*, Chevr. Bull. Soc. Ent. Fr. (5) vii. p. ix (=*N. krugi*, Qued. Berl. ent. Zeitschr. xxx. p. 121), from Puerto Rico.

1. **Notoxus ruficollis.** (Tab. XI. figg. 13, 13 *a*.)

Elongate, rather narrow; the head pitchy-black, finely and sparsely pubescent, and with some long erect hairs in front; the prothorax reddish-testaceous, the horn and crest piceous, sparsely clothed with fine, silky, decumbent, ashy pubescence and with scattered erect hairs, the basilar groove on either side filled with dense whitish pubescence; elytra leaden-black, dull, clothed with exceedingly short, fine, decumbent, ashy pubescence and with scattered, rather longer, serially arranged, decumbent hairs. Head minutely punctured, the front concave, the eyes moderate in size; antennæ pitchy black, the apical joint lighter; prothorax broader than long, minutely and rather sparsely punctured—the horn moderately long, rather narrow, slightly wider in the female, oval at the tip, the sides coarsely serrate and margined, the crest not much raised, its margins indicated by a row of rather coarse tubercles; elytra moderately long, widest about the middle, very finely, shallowly, and closely punctured, the usual oblique depression below the shoulders obsolete, the humeri moderately distinct, the apices conjointly rounded in both sexes, the sutural angle obtuse; beneath piceous; legs pitchy-brown.

Length 3 millim.

Hab. Panama, San Lorenzo in Chiriqui (*Champion*).

Two examples, apparently male and female. Closely allied to *N. bicolor* (Say), a common insect in the Atlantic States of North America, from a type of which (kindly communicated by Dr. Horn) it differs in its narrower shape, narrower thoracic horn, much more finely punctured elytra, darker head, antennæ, legs, and thoracic horn, and smaller size. The elytra are very opaque, and clothed with exceedingly short, fine, decumbent pubescence and serially arranged rather longer hairs. The head and thorax bear scattered long erect hairs, the thoracic horn is clothed with long hairs beneath, and the basilar groove is filled on either side with dense whitish pubescence.

2. **Notoxus atripennis.**

Elongate, rather narrow, opaque; the head piceous-brown, testaceous in front, finely and sparsely pubescent; the prothorax reddish-testaceous, the horn and crest piceous, sparsely clothed with long, silky, decumbent fulvous pubescence, the horn above and beneath with rather long hairs, the basilar groove on either side filled with dense whitish pubescence; elytra dull black, clothed with exceedingly short, fine, decumbent, ashy pubescence. Head finely punctured, the front slightly concave, the eyes large; antennæ pitchy-black, the apical joint lighter; prothorax as long as broad, finely punctured—the horn moderately long, rather broad, rounded at the tip, the sides serrate and margined, the crest not much raised, its margins indicated by a row of coarse tubercles; elytra long, widest about the middle, very finely, shallowly, and closely punctured, the usual oblique depression below the shoulders obsolete, the humeri moderately distinct, the apices conjointly rounded, the sutural angle obtuse; beneath piceo-testaceous; legs pitchy-brown.

Length 3½ millim. (♀.)

Hab. Guatemala, Chacoj in the Polochic valley (*Champion*).

One female example. The eyes in this species are unusually large, considerably larger than in *N. ruficollis* or *N. bicolor*. The thorax is longer than in *N. ruficollis*; the pubescence on the disc is longer and fulvous in colour; and the horn is broader and less coarsely serrate laterally. As in *N. ruficollis*, the elytra are much more finely and shallowly punctured than they are in *N. bicolor*.

3. **Notoxus impressus.** (Tab. IX. figg. 14, 14 *a*, ♂.)

Elongate, narrow, piceous or piceous-brown, shining, somewhat thickly clothed with fine decumbent pubescence, without intermixed erect hairs; the prothorax varying in colour from piceous to piceo-testaceous, the horn reddish or reddish-testaceous; the elytra testaceous, with a spot on either side of the scutellum below the base, a rather broad transverse fascia at or just beyond the middle, and the apex, piceous, the piceous colour in some examples extended along the suture from the median fascia to the postscutellar spot and also along the lateral margin to the base. Head with a few erect hairs, finely and sparsely punctured, the front more or less concave; prothorax globose, as long as broad, minutely and very sparsely punctured—the horn long and moderately broad, a little narrower in the male, rounded at the tip, the sides distinctly margined and finely serrate, the crest not much narrower than the horn, feebly raised, its margins indicated by a row of small tubercles; elytra narrowing from the middle to the base, elongate-oval, finely and moderately closely punctured, the punctuation shallower towards the apex, the usual oblique depression below the shoulders deep in both sexes, the humeri distinct, the apices conjointly rounded in both sexes, the sutural angle rather obtuse; beneath varying in colour from piceous to piceo-testaceous; legs and antennæ testaceous, the latter and the femora and tibiæ sometimes slightly infuscate; fifth ventral segment with a shallow triangular depression in the middle at the apex, and the apex truncate in the male.

Length $2\frac{1}{2}$-3 millim. (♂ ♀.)

Hab. GUATEMALA, Aceytuno (*Salvin*), Guatemala city (*Salvin*, *Champion*), Capetillo, Calderas (*Champion*).

Not rare on the central plateau of Guatemala, at elevations between 5000 and 7000 feet. Narrower and more shining than *N. acuminatus*; the apices of the elytra conjointly rounded (not subacuminate) in both sexes; the elytral pubescence entirely decumbent, without intermixed erect hairs. The colour is variable. The antennæ are very long and comparatively slender in the male, shorter and stouter in the female. The thorax is shining and globose.

4. **Notoxus eximius.** (Tab. IX. figg. 15, 15 *a*, ♀.)

Moderately elongate, narrow, piceous, thickly clothed with very fine decumbent pubescence, without intermixed erect hairs; the prothoracic horn rufous or testaceous; the elytra piceous, each with oblique stripe below the shoulders (not reaching the suture) and a curved oblique stripe beyond the middle (curving upwards and narrowing towards the suture—in some specimens reaching it, in others not extending so far inwards) testaceous or fusco-testaceous, the pubescence on these stripes more or less whitish—in some examples silvery-white, the base and apex sometimes paler; the pubescence on the head and on the base of the prothorax whitish. Head sparsely and minutely punctured, with a few erect hairs in front, the front concave in the middle; prothorax globose, as long as broad, very densely and minutely punctured, opaque—the horn moderately long, narrow in the male, much broader in the female, rounded at the tip, the sides serrate and distinctly margined, the crest slightly raised, its margins feeble or merely indicated by a row of tubercles; elytra narrowing from the middle to the base, oblong-oval, minutely and densely punctured, slightly shining, the usual oblique depression below the shoulders deep in both sexes, the humeri distinct, the apices conjointly rounded in both sexes, the sutural angle rather obtuse; beneath piceous; antennæ testaceous, the outer joints often darker; legs testaceous, the outer halves of the femora sometimes infuscate or piceous; fifth ventral segment unimpressed and broadly and shallowly emarginate at the apex in the male.

Length $2\frac{1}{4}$–$2\frac{3}{4}$ millim. (♂ ♀.)

Hab. GUATEMALA, near the city, Dueñas, Zapote (*Champion*); NICARAGUA, Chinandega (*Sallé*); PANAMA, Tolé (*Champion*).

Found in abundance at Zapote, more sparingly elsewhere. This elegant little species is the smallest of the Central-American *Notoxi*. It may be readily identified by the two oblique fasciæ on each elytron (one occupying the oblique post-humeral depression, the other extending upwards and nearly or quite reaching the suture); the punctuation is dense, not only on the thorax but on the elytra also, the thorax being quite opaque; the pubescence is fine and decumbent; the oblique depression on the elytra is deep in both sexes; the thoracic horn varies greatly in width in the two sexes (in one female example it is twice as wide as in some males). The North-American *N. bifasciatus*, Lec., approaches *N. eximius* in some of its characters, and an undescribed *Notoxus* from Santarem on the Upper Amazons (specimens of which are contained in the British-Museum collection) also comes near it.

5. **Notoxus opacus.** (Tab. IX. figg. 16, 16 *a*, ♂.)

Elongate, subparallel, opaque, piceous, thickly clothed with rather coarse decumbent pubescence and scattered, serially arranged, moderately long, erect hairs; the prothoracic horn rufous; the elytra with a large spot on either side of the suture immediately below the base, a rather broad fascia just beyond the middle (formed by a curved transverse band on each elytron, these extending upwards at the suture), and an apical patch, these markings black and clothed with dark brown pubescence, the rest of the surface of a dull leaden colour and clothed, like the head and prothorax, with ashy pubescence. Head rather narrow, very finely and sparsely punctured, the front slightly concave; prothorax relatively small, about as long as broad, very finely and sparsely punctured, slightly shining—the horn (♂) long and narrow, rounded at the tip, very feebly margined and slightly serrate at the sides, the crest moderately raised, a little narrower than the horn, and finely margined; elytra moderately long, comparatively broad, subparallel, very opaque, closely and very finely punctured, the usual oblique depression below the shoulders rather deep (the postscutellar spot appearing raised), the humeri distinct, the apices conjointly rounded; beneath and the antennæ piceous, the basal joints of the latter ferruginous; legs piceous, the tibiæ at the base and the tarsi, in part, ferruginous; fifth ventral segment deeply transversely concave in the middle behind and the apex truncate in the male.

Length $3\frac{1}{2}$ millim. (♂.)

Hab. Mexico, Cerro de Plumas (*Höge*).

One male example. A very distinct species, recognizable by the opaque elytra, narrow head and thorax, and long and narrow thoracic horn; the transverse concavity of the fifth ventral segment of the male is very deep. The markings of the elytra are clothed with dark brown pubescence, the rest of the surface with ashy pubescence, the transition from one to the other being very abrupt, though the ground-colour of the elytra itself is very dark. When denuded of pubescence, the thorax is moderately shining and the elytra are opaque.

6. **Notoxus ventralis.** (Tab. IX. figg. 17, 17 *a*, ♂.)

Elongate, subparallel, piceous, thickly clothed with fine decumbent pubescence, without intermixed erect hairs; the disc of the prothorax and the horn and crest reddish-testaceous; the elytra with a large elongate-subtriangular lateral patch before the middle extending to the shoulders and along the base, and a narrow strongly angulated fascia (formed by a V-shaped mark on each elytron) considerably beyond the middle, testaceous, these marks clothed with whitish pubescence, the rest of the surface with brownish pubescence (the

triangular mark darker in colour in one example, but its shape well defined by whitish pubescence). Head finely and rather thickly punctured, finely pubescent, with a few short erect hairs in front, the front flat or slightly concave; prothorax broader than long, sparsely and finely punctured, slightly shining—the horn (♂) long and subparallel, rather narrow, oval at the tip, distinctly margined, the sides not or very feebly serrate, the crest moderately raised, considerably narrower than the horn, and sharply margined; elytra subparallel, moderately long, shining, closely and finely punctured, the usual oblique depression below the shoulders shallow, the humeri distinct, the apices conjointly rounded; beneath piceous; legs testaceous or fusco-testaceous, the femora piceous in one example; antennæ testaceous or ferruginous, with the outer joints a little darker; fifth ventral segment with a deep triangular excavation at the apex, and the apex a little emarginate, in the male.

Length 3–3½ millim. (♂.)

Hab. Mexico, Guanajuato (*Sallé*), Jalapa (*Höge*).

Two male examples. In the deep triangular excavation of the fifth ventral segment in the male and in the fine and entirely decumbent pubescence this species resembles the North-American *N. nuperus*, Horn; the elytra, however, are differently marked and shining (not opaque), and the triangular excavation of the fifth ventral segment does not extend to the tip of the preceding segment *. The large triangular whitish-pubescent antemedian lateral patch and the narrow **W**-shaped similarly pubescent postmedian fascia of the elytra are characteristic of this species, these whitish-pubescent markings being present in both examples, though in one the testaceous colour is partly obliterated.

In the British-Museum collection there is a mutilated specimen of a *Notoxus* from Mexico which is perhaps referable to this species (or it may prove to be the other sex of *N. truncatipennis*); it has the thoracic horn and crest similarly shaped, but the post-basal depression of the elytra is very deep and the apices of the latter are somewhat oblique and the sutural angle a little produced. Additional specimens of this and of the following two species are much required, not only to determine the sexual marks of distinction, but to show the amount of variation to which each is subject.

7. Notoxus fraternus.

Elongate, subparallel, piceous, shining, somewhat thickly clothed with moderately coarse decumbent hairs and with scattered, more erect, serially arranged, rather longer hairs intermixed; the prothorax with the extreme base, and in one example the horn and the sides and apex also, rufous; the elytra in one example with a transverse testaceous patch on the middle of the disc towards the apex, in the other with a small reddish spot on the disc before the middle, for the rest entirely piceous, a large, lateral, triangular, antemedian patch and a postmedian transverse fascia (the ground-colour of which is partly testaceous in one example) clothed with whitish pubescence, the rest of the surface with brownish pubescence. Head sparsely and minutely punctured, finely pubescent, with a few short erect hairs in front, the front slightly concave in the middle; prothorax broader than long, finely and not very closely punctured—the horn (♂) rather narrow, moderately long, parallel, finely margined to the tip, the tip rounded, the sides not serrate, the crest moderately or very little raised, finely margined, narrowing from the base; elytra rather long, subparallel, finely and closely punctured, the punctuation finer towards the apex, the usual oblique depression below the shoulders very shallow, the humeri distinct, the apices (♂) separately rounded; beneath, the prothorax excepted, piceous; antennæ testaceous with the apical joints piceous-brown, or

* Examples of *N. nuperus*, Horn, were found by Morrison in Arizona, just beyond our northern boundary.

almost entirely piceous; legs testaceous with the femora darker, the femora and the tarsi (the basal joint excepted) piceous in one example; fifth ventral segment transversely concave in the middle behind, and the apex truncate in the male.

Length 3 millim. (♂.)

Hab. Mexico, Guanajuato (*Sallé*), Jalapa (*Höge*).

Two examples, both males. The Jalapa specimen is abraded and darker in colour, and has the elytra a little more finely punctured and the thoracic horn more distinctly margined at the tip; in the separately rounded apices of the elytra and in the form of the fifth ventral segment in the male it agrees well with the one from Guanajuato *. The shorter thoracic horn and the less distinctly margined crest, the separately rounded apices and the non-angulated post-median fascia of the elytra, and the transversely concave (not triangularly foveate) fifth ventral segment distinguish it from the same sex of *N. ventralis*, an insect occurring at the same localities; the thoracic crest is narrowed from the base in *N. fraternus*, in *N. ventralis* it is more oval in shape. Labelled *N. fraternus*, E. Dugès, in the Sallé collection.

Apparently allied to the North-American *N. talpa*, La Ferté.

8. **Notoxus truncatipennis.**

Elongate, subparallel, piceous, shining, somewhat thickly clothed with moderately coarse decumbent hairs and with scattered, more erect, rather longer hairs intermixed; the prothoracic horn rufous; the elytra with a transverse narrow fascia on the middle of the disc towards the apex, and in one example also the sides below the shoulders, reddish-testaceous, for the rest entirely piceous, a large, triangular, lateral, antemedian patch and a postmedian transverse fascia (the ground-colour of which is partly testaceous) clothed with whitish pubescence, the rest of the surface with brownish pubescence. Head comparatively large and broad, closely and finely punctured, finely pubescent, with a few erect hairs in front, the front flat; prothorax broad and transverse, densely and somewhat coarsely punctured—the horn (♀) long and large, oval, finely margined to the tip, the sides not serrate, the crest moderately raised, finely margined, narrowing from the base; elytra long and subparallel, closely and rather coarsely punctured, the punctuation finer towards the apex, the humeri distinct, the usual oblique depression below the shoulders shallow, the apices (♀) broadly and abruptly truncate; beneath piceous; antennæ ferruginous, with the apical joints piceous; legs reddish-testaceous, the femora infuscate or piceous.

Length 3½ millim. (♀.)

Hab. Mexico, Guanajuato (*Sallé*).

Two worn examples, both females. Also labelled *N. fraternus*, E. Dugès, in the Sallé collection. It cannot possibly, however, be the female of the species here described under that name, the difference in the size and shape of the thoracic horn being more than sexual; the head and thorax are also considerably broader; and the thorax is densely and more coarsely punctured (the punctuation in *N. fraternus* is fine and rather sparse). The thoracic horn is long and largely developed; the crest is moderately raised, finely margined at the sides, without central carina. *N. truncatipennis* is the only Central-American species known as yet with abruptly truncate elytra in the female sex; *N. talpa*, La Ferté, possesses a similar peculiarity.

* In Herr Höge's collection there is a female example of a *Notoxus*, from Ciudad in Durango, allied to this: it comes nearer, however, to the North-American *N. bifasciatus*, La Ferté.

9. **Notoxus crucifer.** (Tab. IX. figg. 18, 18 *a*, ♀.)

Moderately elongate, subparallel, piceous, shining, somewhat thickly clothed with fine decumbent hairs; the prothorax with the extreme base and the horn reddish-testaceous; the elytra each with an oblique stripe extending from the shoulders nearly to the middle, and a transverse band considerably beyond the middle, neither of which reaches the suture (the transverse band widening inwardly, obliquely cut off on its inner side, and extending to the lateral margin, the oblique stripe widening posteriorly and extending along the base), testaceous. Head finely and rather closely punctured, finely pubescent, with a few short erect hairs in front, the front concave; prothorax rather broader than long, finely and somewhat closely punctured—the horn (♀) long and parallel, moderately broad, feebly margined, the sides finely but distinctly serrate, the tip oval, the crest raised, subparallel, the sides finely margined and crenulate; elytra moderately long, subparallel, finely and closely punctured, the punctuation finer towards the apex, the usual oblique depression below the shoulders shallow, the humeri distinct, the apices (♀) conjointly rounded; beneath entirely piceous; antennæ ferruginous; legs reddish-testaceous, the femora darker.

Length 3 millim. (♀.)

Hab. GUATEMALA, San Gerónimo (*Champion*).

One rather worn female example. Closely allied to *N. fraternus*, from which it differs in the thoracic horn being distinctly serrate at the sides and considerably longer (though of similar width), and the crest more parallel. The apices of the elytra are conjointly rounded, and very differently formed from those of the opposite sex of *N. fraternus* or of the same sex of *N. truncatipennis*. The elytral markings, as in the two last-mentioned species, are, no doubt, subject to considerable variation; the pubescence appears to partake of the colour of the surface, though it is whitish at the sides before the middle.

10. **Notoxus acuminatus.** (Tab. IX. figg. 19, 19 *a*, ♂.)

Elongate, narrow, piceous, thickly clothed with fine decumbent pubescence and with scattered, serially arranged, long, erect hairs intermixed; the prothorax with the horn, and sometimes the sides and base, rufous; the elytra variable in colour—usually with an oblique stripe extending from the shoulders downwards (not reaching the middle, but continued along the base to the scutellum), an angulated fascia of variable width beyond the middle (separated from the oblique stripe by an angulated, broad, median fascia of the ground-colour), and the extreme apex (except in one specimen) testaceous, in one example testaceous with a large piceous median patch (not reaching the suture, but laterally extending upwards to the shoulders) and the scutellar and ante-apical regions infuscate. Head dull, finely and rather thickly punctured, the front concave; prothorax as long as broad, oval, densely and finely punctured, opaque—the horn long, rather broad, a little narrower in the male, rounded at the tip, the sides serrate and rather feebly margined, the crest about half the width of the horn in both sexes, moderately raised, its margin indicated by a row of small tubercles; elytra narrowing from the middle to the base, elongate-oval, closely and very finely punctured, the punctures still finer towards the apex, the usual oblique depression below the shoulders deep in both sexes, the humeri distinct, the apices produced and the sutural angles rather sharp in both sexes; beneath piceous; antennæ and legs testaceous, the intermediate joints of the former and the femora and tibiæ often infuscate; fifth ventral segment broadly transversely concave and the apex truncate in the male.

Length $2\frac{3}{4}$–$3\frac{1}{4}$ millim. (♂ ♀.)

Hab. GUATEMALA, Quezaltenango 7800 feet (*Champion*).

Four male and two female examples. This small narrow species differs from the allied forms in the subacuminate apices of the elytra in both sexes. The elytra are distinctly narrowed towards the base; the markings are variable, according to the

predominance of the piceous or of the testaceous colour, though the same general pattern is visible in all the specimens; the oblique depression is deep in both sexes; the erect hairs are long and rather numerous; and the pubescence partakes very much of the colour of the surface from which it arises.

This insect appears to be peculiar to the Los Altos region of Guatemala; a male example of a closely allied, but apparently distinct, species, from Chinautla, Guatemala (*Salvin*), comes very near to it; but this latter, unfortunately, has lost its head and thorax.

11. **Notoxus hirsutus.** (Tab. IX. figg. 20, 20 *a*, ♀.)

Elongate, parallel, densely clothed with very coarse decumbent pubescence and very long erect hairs; the head and prothorax reddish-testaceous, the latter with the sides broadly infuscate; the elytra testaceous, with a small spot on either side of the suture at the base, a median fascia (formed by two oblong spots on each elytron, one at the suture and one on the disc lower down, the four together forming an interrupted inverted **V**), a narrow ill-defined transverse band some distance before the apex, and the sides below the shoulders indeterminately, piceous. Head thickly and finely punctured, dull, the front concave; prothorax about as long as broad, densely and rugosely punctured, opaque—the horn (♀) very large and broad, narrowing behind, granulate within, with four very coarse blunt teeth on each side, the sides a little raised and the tip obtuse, the crest strongly and abruptly raised, sharply carinate in the middle, and with the margins crenulate and sharply raised to the tip; elytra long and parallel, very closely and somewhat coarsely punctured, the punctures finer towards the apex, rather shining, the usual oblique depression below the shoulders strongly impressed, the humeri distinct, the apices conjointly rounded and somewhat obtuse, the sutural angles rather sharp; beneath fusco-testaceous; legs and antennæ testaceous, the knees a little darker.

Length 4½ millim. (♀.)

Hab. Mexico, Presidio de Mazatlan (*Forrer*).

The thoracic horn (fig. 20 *a*) in this insect is larger and more coarsely serrate at the sides than in any other of the Central-American species. The pubescence is also very coarse and dense, and the erect intermixed hairs long and numerous. The elytra are parallel in their basal half; the median fascia is formed of two oblong confluent spots on each elytron, one at the suture and one on the disc lower down; the other markings are less distinct. The thorax is opaque and densely and rugosely punctured. The still coarser pubescence, the form of the horn, and the elytral markings distinguish *N. hirsutus* from *N. mexicanus* &c.

12. **Notoxus calcaratus.** (Tab. IX. figg. 21, 21 *a*, ♂.)

Notoxus calcaratus, Horn, Trans. Am. Ent. Soc. xi. p. 170[1].

Hab. North America, Nevada, Arizona, Texas, and Lower California[1].—Mexico, Northern Sonora (*Morrison*).

Sent to us in abundance by Morrison. In this species the anterior tibiæ of the male are furnished with a triangular tooth on the inner side at the middle; the elytra have a spot on either side of the suture just below the base, a transverse subangulate median band, and the apex, black or piceous; the upper surface is thickly clothed with coarse

decumbent pubescence and long, coarse, erect hairs. The thoracic horn is very broad and stout in the female, a little narrower in the male, sharply margined and more or less serrate at the sides; the crest is abruptly elevated, strongly margined, and has a carina down the middle *. The fifth ventral segment has a shallow triangular impression at the apex in the male. The apices of the elytra are conjointly rounded in both sexes.

13. **Notoxus monodon.**

Anthicus monodon, Fabr. Syst. Eleuth. i. p. 289[1]; Say, Amer. Ent. p. 21, t. 10. fig. 2[2]; Complete Writings, i. p. 21.

Notoxus monodon, La Ferté, Monogr. Anthic. p. 37, t. 21. fig. 7[3]; Lec. Proc. Ac. Phil. vi. p. 93[4]; Horn, Trans. Am. Ent. Soc. xi. p. 171[5].

Monocerus monodon, Lec. Journ. Acad. Phil. n. ser. i. p. 90[6].

Notoxus pilati, La Ferté, Monogr. Anthic. p. 297[7].

var. *Notoxus decoloratus*, La Ferté, Monogr. Anthic. p. 302 (=*testaceus*, Pilate, in litt.)[8].

var. *Notoxus cumanensis*, La Ferté, Monogr. Anthic. p. 38[9].

var. *Notoxus piccolominii* (Dupont), La Ferté, Monogr. Anthic. p. 38[10].

Hab. North America[1 2 3 4 6], everywhere in the United States and also in Lower California[5], California[10], Texas[7 8].—Mexico, Chilpancingo (*H. H. Smith*), Guanajuato (*Sallé*), Acapulco, Iguala, Cuernavaca, Vera Cruz, Jalapa (*Höge*); British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Antigua (*Sallé*), Zapote, Dueñas, Guatemala city (*Champion*); Panama, Caldera and San Lorenzo in Chiriqui (*Champion*).—Venezuela, Cumana[9].

This is by far the commonest species of *Notoxus* in Central America, and at the same time one of the most widely distributed of the whole of the American Heteromera. More than half of the large number of specimens before me, including the whole of those from the State of Panama, have the sides of the thorax and the sides of the elytra from the base to the median fascia marked with black, a few also having a narrow subapical fascia. Most of those from Mexico have these markings obliterated, and the elytra merely with a spot on either side of the scutellum and a transverse fascia a little beyond the middle, the fascia extending upwards at the suture. *N. monodon* is distinguishable from most of the other species here described by the median elytral fascia curving up towards the suture and there forming a broad quadrangular patch; the pubescence is long and coarse, with long erect hairs intermixed; the anterior tibiæ are simple, and the elytra are conjointly rounded, in both sexes; the thoracic horn is moderately long and broad, and varies a good deal in the form of the margin &c. *N. cumanensis* was chiefly separated from *N. monodon* by La Ferté owing to the difference of locality; the characters given by him to distinguish it are derived entirely from the thorax and are of a variable nature. The example from Antigua in Sallé's collection is labelled with the MS. name of *N. angustatus*, La Ferté. Dr. Horn

* Omitted by our artist.

gives the length of *N. monodon* as 2·5–5 millim.; our largest example does not measure more than 4 millim. with the head extended. I have examined a typical specimen from the United States, communicated by Dr. Horn.

14. **Notoxus mexicanus.** (Tab. IX. figg. 22, 22 *a*.)

Elongate, subparallel, reddish-testaceous, somewhat thickly clothed with coarse, decumbent pubescence and rather long erect hairs; the elytra testaceous, with a large spot on either side of the suture just below the base, a curved fascia commencing at the sides beyond the middle and extending upwards along the suture (sometimes nearly reaching the postbasal spots, in one example interrupted and less extended), and an anteapical patch extending upwards along the suture, piceous. Head thickly and finely punctured, dull, the front flat; prothorax transverse, very closely and finely punctured, slightly shining—the horn long and parallel, narrow in the male, a little broader in the female, concave within, coarsely or moderately coarsely serrate at the sides, and oval at the tip, the crest considerably raised, narrower than the horn, and sharply margined to the tip, the margins feebly crenulate; elytra long and subparallel, rather shining, very closely and somewhat coarsely punctured, the punctuation finer towards the apex, the usual oblique depression below the shoulders very faintly impressed, the humeri distinct, the apices conjointly rounded and somewhat obtuse; beneath and the legs and antennæ testaceous or fusco-testaceous; fifth ventral segment unimpressed in the male.

Length $3\frac{3}{4}$–4 millim.

Hab. Mexico, Presidio de Mazatlan (*Forrer*), Acapulco and Iguala in Guerrero (*Höge*), Guanajuato (*Sallé*).

Nine specimens, agreeing well with each other. More elongate and larger than *N. monodon*; the thoracic horn longer, narrower, and parallel, the thorax itself much more closely punctured. The thoracic horn resembles that of *N. anchora*, Hentz, in shape, but has a more prominent crest. The pubescence is shorter and finer than in *N. calcaratus*. This is one of several Central-American species allied to *N. apicalis*, Lec., *N. monodon* (Fabr.), and *N. calcaratus*, Horn. Our figure is taken from the Guanajuato example; this has the median fascia of the elytra interrupted.

15. **Notoxus cristatus.** (Tab. IX. figg. 23, 23 *a*, ♂.)

Elongate, subparallel, reddish-testaceous, thickly clothed with long coarse decumbent pubescence and long erect hairs; the prothorax with a black spot on either side of the crest; the elytra testaceous or reddish-testaceous, with a spot on either side of the suture just below the base, a similar spot a little lower down below the shoulder (obsolete in one example), a very strongly angulated median fascia, and a narrower anteapical fascia (extending upwards along the suture and also with two branches extending upwards at the sides), black. Head densely pubescent and with numerous long erect hairs at the sides and in front, sparsely punctured, dull, the front slightly concave; prothorax broader than long, finely and rather closely punctured, dull—the horn broad, a little narrowed behind, and margined and serrate at the sides, the crest abruptly elevated, sharply margined to the tip, and with a distinct carina down the middle, the margins crenulate; elytra long and subparallel, rather shining, closely and finely punctured, the usual oblique depression below the shoulders rather shallow, the humeri distinct, the apices a little produced, the sutural angles rather sharp in the male, more obtuse in the female; beneath fusco-testaceous; legs and antennæ testaceous; fifth ventral segment unimpressed in the male.

Length $3\frac{3}{4}$–$4\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Guanajuato (*Sallé*), Cuernavaca (*Höge*).

Three examples only. The male has the sutural angles of the elytra rather sharper,

and the thoracic horn narrower and more coarsely serrate laterally; the fifth ventral segment is unimpressed. This species is allied to *N. calcaratus*, from which it differs in the much more strongly angulated elytral fasciæ, simple anterior tibiæ in the male, and sharper sutural angles of the elytra in both sexes. The elytral markings are very sharply defined, the two fasciæ both very strongly angulated and only separated by a **W**-shaped mark of the ground-colour. The unimpressed head, different elytral markings, &c. distinguish *N. cristatus* from *N. pueblensis*.

16. **Notoxus pueblensis.** (Tab. IX. figg. 24, 24 *a*.)

Moderately elongate, subparallel, reddish-testaceous, somewhat thickly clothed with long coarse decumbent pubescence and long erect hairs; the sides of the prothorax broadly piceous; the elytra testaceous, with a spot on either side of the suture below the base, an angulate fascia a little beyond the middle, a narrow indeterminate anteapical fascia (almost obsolete in one example), and the sides below the shoulders, piceous. Head rather sparsely pubescent, and with numerous long erect hairs in front, very finely and somewhat closely punctured, moderately shining, the front longitudinally excavate in the middle; prothorax broader than long, sparsely and finely punctured, rather shining—the horn moderately broad, feebly margined and subserrate at the sides, the crest abruptly elevated, more distinctly margined, and carinate down the middle, the margins crenulate; elytra subparallel, moderately long, shining, closely and finely punctured, the punctuation finer towards the apex, the usual oblique depression below the shoulders deep, the humeri distinct, the apices almost separately rounded in the male, conjointly so in the female; beneath fusco-testaceous; legs and antennæ testaceous; fifth ventral segment unimpressed in the male.

Length $2\frac{3}{4}$ millim. (♂ ♀.)

Hab. Mexico, Puebla (*Sallé*).

Two examples: in one of these, the supposed male, the apices of the elytra are less conjointly rounded than in the other; the horn is similarly shaped in both. *N. pueblensis* has the elytra marked very much as in *N. calcaratus*; from which it differs in the shorter and more scattered erect pubescence, the more shining surface, the longer thoracic horn, the less closely and more coarsely punctured elytra, and the simple anterior tibiæ in the male. The upper surface is more shining than in most of the allied forms, and the dark markings of the elytra show an æneous lustre in certain lights.

MECYNOTARSUS.

Mecynotarsus, La Ferté, Monogr. Anthic. p. 57 (1848); Lacordaire, Gen. Col. v. p. 595 (1859); Horn, Trans. Am. Ent. Soc. xi. p. 175 (1884).

Twenty-one species of this very widely distributed genus have been described: of this number three only are from the New World, two from the South-eastern States of North America and one from California. We now have to record one from the Pacific coast of Guatemala. *Mecynotarsus* will probably be found eventually on the Atlantic and Pacific shores of Mexico; but we have not, as yet, received a single specimen from any part of Mexico. These insects are chiefly found in sandy places on the coast or at the mouths of rivers.

1. **Mecynotarsus sexnotatus.** (Tab. IX. figg. 25, 25 *a*.)

Bronze-black, rather shining; the head clothed with silvery-white pubescence and with numerous very long, coarse, erect hairs at the sides and in front; the prothorax clothed with brownish pubescence on the disc and coarser silvery-white scale-like pubescence at the sides, the sides with two or three long erect hairs; elytra each with a large oblong lateral patch of coarse silvery-white scale-like pubescence below the shoulder, a smaller patch a little below the middle, and a still smaller one close to the suture at the apex, for the rest sparsely clothed with fine brown pubescence. Head densely and minutely punctured, broadly longitudinally depressed in the middle in front; antennæ slender, piceous-brown; prothorax globose, nearly as long as broad, thickly and finely punctured—the horn moderately large, wider in the female than in the male, very coarsely tridentate on each side, and with a strong blunt tooth at the apex, the crest long and narrow, very little elevated, strongly margined to the apex, the margins serrulate; elytra oval, densely and coarsely punctured (the punctuation much coarser than that of the head or prothorax), the humeri distinct but obtuse, the apices obtuse and slightly divergent in the male, more rounded in the female; legs testaceous or fusco-testaceous, the femora in great part piceous; beneath piceous or piceous-brown, opaque, densely and finely punctured, thickly clothed with coarse whitish pubescence; fifth ventral segment depressed in the middle and emarginate at the apex in the male.

Length $1\frac{2}{3}$–2 millim. (♂ ♀.)

Hab. GUATEMALA, Champerico (*Champion*).

Found in profusion on the sea-beach at Champerico on the Pacific coast. Allied to *M. elegans*, Lec., from Florida, but with very differently arranged pubescence on the elytra. The elytra are coarsely punctured, and have three lateral patches of coarse silvery-white scale-like pubescence; the thoracic horn is coarsely tridentate on each side, and has a coarse blunt tooth at the apex; the head is longitudinally depressed and furnished with numerous long, coarse, erect hairs at the sides and in front. Certain Australian species somewhat closely resemble *M. sexnotatus*.

TOMODERUS.

Tomoderus, La Ferté, Monogr. Anthic. p. 94 (1848); Lacordaire, Gen. Col. v. p. 593.

Of the sixteen described species of *Tomoderus*, five only are from the New World—two from the United States and three from Colombia. The genus is represented in Central America by seven species, all of which are apparently new; two of these are of very small size, less than 2 millim. in length. In a rather large undescribed species from Colombia, of which a single example is contained in Mr. F. Bates's collection, labelled *Tomoderus pallidicornis*, Schauf., the shoulders of the elytra are completely effaced (the elytra, in consequence, being more ovate) and the body is apterous; this insect is, perhaps, generically distinct from *Tomoderus*.

The Central-American species may be tabulated thus:—

Prothorax deeply canaliculate; species comparatively large.
- Elytra with a large and deep post-basal depression . . . . . *excavatus*.
- Elytra with a very shallow post-basal depression . . . . . *canaliculatus*.

Prothorax at most obsoletely or very finely canaliculate (the groove sometimes confined to the constricted part); species smaller.
- Elytra with a large deep post-basal depression extending outwards to the humeri; basal joints of antennæ slender and moderately moniliform . *complanatus*.

Elytra with a small deep post-basal depression close to the suture; basal joints of antennæ stout and strongly moniliform . . . . . *monilicornis.*

Elytra with a very shallow post-basal depression (sometimes obsolete), coarsely punctured on the basal half.

Antennæ moderately stout, brownish, with the basal and apical joints testaceous; size moderate . . . . . *brevicornis.*

Antennæ slender, piceous, with the apical joint usually testaceous; size very small . . . . . *exiguus.*

Elytra regularly convex, without post-basal depression, very finely and sparsely punctured on the basal half; antennæ with the intermediate joints usually infuscate and the apical three or four yellowish; size very small . . . . . *brevis.*

1. **Tomoderus excavatus.** (Tab. IX. fig. 26, ♀.)

Short, broad, convex, shining, dark reddish-brown, the elytra (except at the base and apex) piceous or piceous-brown; the head and prothorax very sparsely pubescent, the elytra somewhat thickly clothed with longer and coarser semierect fulvous hairs. Head transverse, large, smooth, the eyes small and not prominent; antennæ rather short, moderately stout, widening outwardly, joints 9 and 10 strongly transverse and broader than 8, 11 about twice as long as 10, ovate, acuminate, 1 and 2 ferruginous, 3–8 black, 9–11 testaceous; prothorax narrower than the head, one half longer than broad, smooth, very strongly constricted behind the middle (the posterior portion nearly as wide at the base as the anterior portion), the disc longitudinally sulcate (deeply so on the posterior portion, more finely and shallowly so on the anterior portion, the groove on the latter confined to the most elevated part, and not extending to the apex); elytra broad and short, more than twice as wide as the prothorax, rather obtuse behind, a little dilated at the sides about the middle, each with a large and deep transverse or oblique depression on the disc below the base, and irregular rows of somewhat distantly placed punctures, the punctures coarser and distinct at the base, fine and shallow beyond the basal depression, and becoming very faint towards the apex; beneath piceous; legs testaceous or fusco-testaceous, the femora darker in the middle, the latter moderately clavate.

Length $2\frac{2}{3}$ millim. (♀.)

Hab. GUATEMALA, Chiacam and Senahu in Vera Paz (*Champion*).

Two examples, both females. Allied to the Colombian *T. signaticornis*, La Ferté; but differing from it in the very deep post-basal depression (transverse in one example, oblique in the other) of the elytra, and in the deeper longitudinal sulcature of the posterior part of the thorax. The antennæ are very similarly coloured.

2. **Tomoderus canaliculatus.**

Short, broad, convex, shining, pale castaneous, the elytra lighter at the apex, the head and prothorax very sparsely pubescent, the elytra thickly clothed with longer and coarser semierect fulvous hairs. Head and antennæ almost as in *T. excavatus*, the antennæ with joints 1 and 2 testaceous, 3–8 piceous-brown, and 9–11 flavo-testaceous; prothorax very much as in *T. excavatus*, but with the longitudinal median groove deep on both the anterior and the posterior portions (the groove on the anterior portion deeper and longer than in *T. excavatus*, but not reaching the apex); elytra longer than in *T. excavatus*, a little dilated at the sides before the middle, with only a very shallow transverse depression on the disc below the base, the punctuation fine and shallow (much finer at the base than in *T. excavatus*), becoming almost obsolete behind, the punctures forming irregular rows; beneath reddish-brown, the last two ventral segments

flavo-testaceous; legs flavo-testaceous, the femora a little darker at the base, the latter moderately clavate.

Length $2\frac{2}{3}$ millim. (♂.)

Hab. NICARAGUA, Chontales (*Janson*).

One male example. This insect agrees closely with La Ferté's description of *T. signaticornis* *; the thoracic groove, however, is much deeper (apparently as distinct as in the eastern *T. sulcicollis*, La Ferté) and the elytral punctuation finer. Compared with *T. excavatus*, the thorax is more deeply sulcate on the anterior portion, and the elytra are longer, much more finely punctured at the base, and have only a very shallow post-basal depression. The last dorsal segment is truncate at the apex.

3. Tomoderus complanatus.

Short, moderately broad, rather depressed, shining, reddish-brown, the elytra reddish-testaceous or testaceous with the disc of each indeterminately infuscate beyond the middle; the head and prothorax very sparsely, the elytra more thickly, clothed with long, semierect, silky pubescence. Head transverse, smooth, obsoletely canaliculate on the vertex; eyes very small, not prominent, very finely granulated; antennæ short, slender at the base and thickening outwardly, the joints strongly moniliform, 9 and 10 strongly transverse, 1 ferruginous, 2–10 black, 11 testaceous; prothorax narrower than the head, about one fourth longer than broad, smooth, very strongly constricted behind the middle, the posterior portion a little narrower at the base than the anterior portion, both finely canaliculate; elytra more than twice as broad as the prothorax, short, rather depressed, widest a little before the middle, the usual post-basal depression large and rather deep (extending outwardly to the humeri), the surface confusedly punctured, the punctures moderately fine at the base and becoming very much finer and shallower beyond the middle; beneath dark reddish-brown; legs testaceous, the femora moderately clavate.

Length $2\frac{1}{4}$ millim.

Hab. MEXICO, Jalapa (*Höge*).

Two examples. The small and non-prominent eyes, the finely but distinctly canaliculate thorax, and the large post-basal depression of the elytra separate *T. complanatus* from *T. monilicornis* and *T. brevicornis*. The elytra are more finely punctured at the base than in *T. brevicornis*, and the post-basal depression is much more extended than in *T. monilicornis*; the punctuation is confused, and shows scarcely any trace of a linear arrangement. The vertex is distinctly canaliculate in one example, very obsoletely so in the other. The thorax is considerably shorter than in *T. monilicornis*, and the anterior portion is rather broader than the posterior portion (more distinctly so in one specimen). The North-American *T. interruptus*, La Ferté, is an allied but considerably larger species.

4. Tomoderus monilicornis.

Closely allied to *T. brevicornis*. The head and prothorax pitchy-black, the former testaceous in front, the elytra castaneous; the eyes rather prominent; the antennæ stouter than in *T. brevicornis* (the basal joints especi-

* This species is represented in the La Ferté collection by an example of the N.-American *T. interruptus*; the type is apparently lost.

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ally), joints 2–8 more strongly moniliform and 9 and 10 more strongly transverse, piceous, the basal joint a little lighter, 8–11 flavo-testaceous; the prothorax a little longer than in *T. brevicornis* (about one half longer than broad), the constricted part very distinctly canaliculate, the groove extending to the posterior but not to the anterior portion; the elytra shorter and a little more convex than in *T. brevicornis*, more than twice as broad as the prothorax, with a rather deep transverse depression on either side of the suture below the base (the depressions almost confluent at the suture, and not extending outwards beyond the third row of punctures), the punctures distinctly arranged in rows towards the base, moderately coarse anteriorly, and becoming very much finer beyond the middle; beneath coloured as above; legs entirely flavo-testaceous, the femora moderately clavate.

Length $2\frac{1}{4}$ millim.

Hab. MEXICO, Cordova (*Sallé*).

One example, apparently a male. The black head and thorax, the stouter and more moniliform basal joints of the antennæ, the more deeply canaliculate constricted part of the thorax, and the deeper post-basal depression and the more linear arrangement of the punctures of the elytra distinguish *T. monilicornis* from *T. brevicornis*.

5. **Tomoderus brevicornis.** (Tab. IX. fig. 27.)

Short, moderately broad, rather convex, shining, brownish-testaceous or pale castaneous, the head, or the head and thorax, reddish-brown; the head and prothorax very sparsely, the elytra more thickly, clothed with long, semierect, silky pubescence. Head transverse, smooth; the eyes slightly prominent, somewhat coarsely granulated; antennæ short, extending very little beyond the base of the prothorax, thickening outwardly, the basal joints (the first excepted) slender, and the ninth and tenth strongly transverse, piceous-brown or brown, with the three basal joints and the apical one, two, or three testaceous; prothorax narrower than the head, about one third longer than broad, smooth, very strongly constricted behind the middle, the posterior portion only a little narrower at the base than the anterior portion, the constricted part distinctly canaliculate and in some examples the anterior and posterior portions obsoletely so; elytra more than twice as broad as the prothorax, rather short, slightly rounded at the sides, widest at the middle, the usual post-basal depression obsolete or very faint, the surface irregularly punctured, the punctures deep and coarse at the base and gradually becoming finer towards the apex; beneath coloured as above; legs flavo-testaceous or testaceous, the femora moderately clavate.

Length $2\frac{1}{4}$–$2\frac{1}{3}$ millim. (♂ ♀.)

Hab. MEXICO, San Juan Bautista in Tabasco (*Höge*), Teapa (*coll. Oberthür*, *H. H. Smith*); GUATEMALA, El Reposo, Zapote, Tamahu, Chiacam (*Champion*).

Not uncommon in Guatemala, on both the Atlantic and Pacific slopes; four specimens only from S.E. Mexico. Very much smaller than *T. canaliculatus*; the thorax similarly shaped, but, at most, very obsoletely canaliculate (the constricted part only, as a rule, being channelled); the elytra more coarsely punctured at the base, the punctures showing a tendency to a linear arrangement; the legs entirely flavo-testaceous; the antennæ more slender towards the base. The thorax is longer and the anterior portion is relatively narrower than in the North-American *T. interruptus*, La Ferté, and *T. constrictus* (Say); in the majority of the specimens the anterior and posterior portions are without trace of a median channel. *T. hirtulus*, La Ferté, from Colombia, the type of which I have examined, is an allied species, but is a larger and broader insect than *T. brevicornis*, and also differs in the form of the antennæ. An example of the latter bears the MS. name of *T. flavipes*, Deyr., in M. Oberthür's collection.

6. Tomoderus exiguus.

Short, moderately broad, rather convex, shining, pale castaneous or reddish-brown, the head in one example a little darker; the head and prothorax very sparsely, the elytra more thickly, clothed with long, fine, semierect pubescence. Head transverse, smooth, obsoletely canaliculate on the vertex, the eyes very small; antennæ rather short, slender, thickening a little outwardly, and with joints 9 and 10 strongly transverse, black or piceous, the basal joint usually a little lighter, the apical joint (except in one example) testaceous; prothorax narrower than the head, about one fourth longer than broad, very strongly constricted behind the middle, the posterior portion very little narrower at the base than the anterior portion, both (when viewed in certain lights) finely canaliculate; elytra short, more than twice as broad as the prothorax, rather convex, widest a little before the middle, the usual post-basal depression exceedingly shallow or nearly obsolete, the surface confusedly and somewhat coarsely punctured, the punctuation becoming much finer beyond the middle; beneath coloured as above; legs testaceous or ferruginous, the femora sometimes a little darker, the latter moderately clavate.

Length $1\frac{2}{3}$–$1\frac{3}{4}$ millim. (♂ ♀.)

Hab. GUATEMALA, Senahu in Vera Paz 2800 feet (*Champion*).

Six examples. This minute species resembles *T. brevicornis*, from which it differs in its much smaller size and more slender antennæ. The punctuation of the elytra is coarse and confused on the basal half, and the post-basal depression is very faint (as in *T. brevicornis*); the antennæ are slender and piceous in colour, the apical joint usually testaceous and the basal joint ferruginous; the thorax is very finely canaliculate, and the top of the vertex also. The following species is more nearly allied to it.

7. Tomoderus brevis.

Short, broad, convex, shining, unicolorous reddish-testaceous or pale castaneous, the head and prothorax with a few very fine erect hairs, the elytra sparsely clothed with long, fine, semierect pubescence. Head transverse, smooth, the eyes very small; antennæ rather short, slender, thickening outwardly, joints 9 and 10 strongly transverse, 1 and 2 testaceous, 3–6 or 3–7 fusco-testaceous, and 7–11 or 8–11 flavo-testaceous, sometimes testaceous with the apical four or five joints yellower; prothorax narrower than the head, about one third longer than broad, very strongly constricted behind the middle, the posterior portion a little narrower at the base than the anterior portion, the latter usually (when viewed in certain lights) obsoletely canaliculate in front; elytra short, at least three times as broad as the prothorax, convex, without post-basal depression, moderately rounded at the sides, widest at the middle, the surface very sparsely, confusedly, and finely punctured, the punctures becoming very much finer beyond the middle, the sides almost smooth; beneath coloured as above; legs testaceous or flavo-testaceous, the femora moderately clavate.

Length $1\frac{1}{2}$–$1\frac{2}{3}$ millim. (♂ ♀.)

Hab. GUATEMALA, Las Mercedes, Cerro Zunil, San Isidro, Zapote (*Champion*); PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

Many specimens, both from Guatemala and the State of Panama. Of the same size as *T. exiguus*; but differing from it in the colour of the antennæ, the almost unchannelled thorax, and the shorter, broader, and more convex elytra, the latter much more finely and sparsely punctured, and without post-basal depression. In the Chiriqui specimens and in one of those from Zapote the antennæ are testaceous with the apical four or five joints yellowish; in all the others the intermediate joints are more or less infuscate. *T. exiguus* appears to be confined to the Atlantic, and *T. brevis* to the Pacific slope.

FORMICOMUS.

Formicomus, La Ferté, Monogr. Anthic. p. 70 (1848); Lacordaire, Gen. Col. v. p. 591.
Anthelephilus (Hope), La Ferté, loc. cit. p. 65.
Formicilla, Leconte, Ann. Lyc. New York, v. p. 152 (1852).

Numerous species of this widely-distributed genus have been described. The American representatives have the femora less strongly clavate than in the Old-World forms. One species is now recorded from our region, this making the fourth known from the American continent.

1. **Formicomus gracilipes.** (Tab. X. fig. 1.)

Bright reddish- or flavo-testaceous, very smooth and shining; the elytra with a broad transverse fascia at or just before the middle (usually widening outwardly and not reaching the suture, sometimes extending completely across, in rare examples almost obsolete), a broad transverse anteapical fascia extending forwards at the suture (occasionally confluent with the median band, and sometimes occupying the whole of the apical portion), and in rare examples the shoulders or the base, narrowly, piceous; the upper surface clothed with scattered exceedingly long, yellowish, erect, bristly hairs, those on the elytra serially arranged. Head large and elongate, rounded at the sides behind, with a few widely scattered fine setiferous punctures; eyes black, coarsely granulated, rather large, moderately prominent; antennæ testaceous, elongate, slender at the base and thickening outwardly, the apical three joints distinctly stouter than the preceding; prothorax nearly twice as long as broad, very much narrower than the head, the sides much rounded before and very strongly but not abruptly constricted behind the middle, the anterior portion transversely convex, the posterior portion dilated laterally at the base, the flanks grooved in the narrowest part, the neck very sharply defined, the surface with a few fine setiferous punctures; elytra subovate, subtruncate at the base and rounded at the apex, flattened on the disc (or with a very shallow transverse depression) below the base, the humeri obtuse but distinct, the surface with a few widely scattered very fine punctures (in some specimens almost obsolete, in others more distinct); legs entirely testaceous, long and slender, the femora very feebly clavate; wings fully developed or merely rudimentary; fifth ventral segment truncate in the male.

Length $2\frac{1}{4}$–$2\frac{2}{3}$ millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*), Vera Cruz (*Höge*); Guatemala, Champerico, Paso Antonio (*Champion*).

Found in abundance by myself on the sea-shore at Champerico on the Pacific coast and by Herr Höge at Vera Cruz on the Atlantic coast, and also occurring inland. *F. gracilipes* is very closely allied to the North-American *F. scitulus*, Lec., a specimen of which from Florida has been communicated by M. Sallé; but differs from it in the more prominent humeri and less ovate elytra and in the longer legs and antennæ. *F. leporinus*, La Ferté, from Brazil, the type of which I have examined, is also an allied form, but differs from both these in its longer thorax and in the coloration of the elytra. *F. mundus*, Lec., is stated to have a large and distinct post-humeral depression and the thorax tripunctate at the base. In most of the Vera Cruz specimens the wings are rudimentary, but others from the same locality have fully developed wings as in all the Guatemalan examples and in the one from Cordova. The mesosternum (as noted by La Ferté in his description of *F. leporinus*) is somewhat angularly extended on either

side in front, this part being clothed with very long erect bristles and visible from above. The elytra are almost smooth in some examples, and distinctly punctured in others.

ANTHICUS.

Anthicus, Paykull, Fauna Suecica, i. p. 253 (1798); La Ferté, Monogr. Anthic. p. 102 (1848); Lacordaire, Gen. Col. v. p. 596.
Acanthinus, La Ferté, Monogr. Anthic. p. 136.
Ischyropalpus, La Ferté, loc. cit. p. 141.

This genus already contains upwards of 400 described species, and is represented in almost every part of the world. Leconte, in his monograph of the North-American species [Proc. Acad. Phil. vii. pp. 95–103 (1852)] enumerated fifty, of which ten were unknown to him; and since the publication of this the genus seems to have been almost ignored by American Coleopterists, though five species from California have subsequently been described by Boheman (Kongl. Svenska Freg. Eug. Resa, Ins. pp. 104–106), without the slightest reference to previously known forms *. We have now to enumerate exactly the same number of species (fifty) from within our limits, of which twenty-nine are described as new; two only have hitherto been recorded from Central America. Thanks to the kindness of M. Réné Oberthür, I have been enabled to study the La Ferté collection of Anthicidæ (which is still in an excellent state of preservation), and by this means to identify very many of our species; Dr. Horn and M. Sallé have also been kind enough to communicate named representatives of various North-American forms. I have also studied, for the purposes of this work, Marseul's very extensive collection of Anthicidæ now in the Paris Museum. Many of the species of this genus are widely distributed, some extending from the United States into Central America, and others from Brazil &c. northwards to Guatemala or Southern Mexico; this may be due to their activity, combined with, apparently, carnivorous habits. The majority of the Central-American representatives do not exhibit any marked peculiarity from those of Tropical South America or from those of the United States; two species, however, *A. bactrianus* and *A. tumidicollis*, differ from all others of the genus previously known in having the posterior portion of the thorax gibbous. The characteristic Tropical-American subgenera *Acanthinus* and *Ischyropalpus*, La Ferté, are both represented within our region—the former by four, the latter by one species. *A. albicinctus*, *A. bituberculatus*, *A. dromedarius*, &c. are also characteristic of the warmer regions of the New World; and the *A. obscurus*-group of the United States, Central America, and the northern part of South America. Two species, *A. foveiventris* and *A. crassicornis*, have remarkably stout antennæ, and *A. clavicornis*

* The localities quoted in this work cannot be relied upon, as I have already remarked, some Chilian or Peruvian forms being recorded by Boheman from Panama or the Sandwich Is.!

has these organs very distinctly clavate. *A. bituberculatus* has a stout conical tubercle on either side of the suture at the base. Good specific characters are sometimes to be found in the form of the fifth ventral segment of the males: this segment in the majority of our species is unimpressed, but in some of them it is foveate or transversely concave in the middle; the apex is usually truncate, sometimes emarginate.

The American synonymy only is quoted.

The following table will assist in the identification of the Central-American species:—

Thorax strongly constricted behind the middle, the sides not denticulate*, the flanks more or less deeply grooved or excavate above the anterior coxæ.
- Elytra with a deep or distinct post-basal depression and tuberculate or transversely swollen at the base, rounded at the apex (the sides more obliquely converging behind in *A. dromedarius* &c.).
  - Anterior portion of the thorax gibbous; the disc transversely grooved behind the middle; antennæ feebly clavate.
    - Elytra moderately tuberculate at the base . . . . . Species 1.
    - Elytra sharply tuberculate at the base . . . . . Species 2.
  - Anterior portion of the thorax gibbous; the disc not transversely grooved behind the middle; antennæ strongly clavate . . Species 3.
  - Anterior portion of the thorax transversely convex; the posterior portion more or less cylindrical, sometimes dilated laterally at the base; the disc not transversely grooved behind the middle (viewed laterally and longitudinally, sloping or gradually rounded to the base).
    - Apical joint of the maxillary palpi moderately broad; elytra spotted or fasciate.
      - Antennæ slender . . . . . Species 4–9.
      - Antennæ very stout . . . . . Species 10, 11.
    - Apical joint of the maxillary palpi very broad; elytra unicolorous, sometimes paler at the base.
      - Head short, rounded at the sides behind . . . . . Species 12–16.
      - Head longer, more obliquely narrowed behind . . . . Species 17.
  - Anterior portion of the thorax transversely convex; the posterior portion gibbous; apical joint of the maxillary palpi very broad . . . . . Species 18, 19.
- Elytra a little flattened on the disc, rounded at the apex, oblong; thorax obsoletely bituberculate in the middle at the base . . Species 20.
- Elytra with a shallow post-basal depression or merely a little flattened below the base, the sides more obliquely converging behind.
  - Surface coarsely punctured at the base . . . . . Species 21.
  - Surface almost smooth . . . . . Species 22, 23.

* In some specimens of *A. clavicornis* one or two indistinct teeth are visible.

Elytra ovate, very convex, not at all flattened below the base, very distinctly striate-punctate in their basal fourth; humeri distinct, but obtuse . . . . . Species 24.

Thorax strongly constricted behind the middle, the sides denticulate; elytra with a shallow or moderately deep post-basal depression (= subg. *Acanthinus*, La Ferté).

Elytra confusedly punctured throughout; thoracic teeth long and coarse . . . . . Species 25.

Elytra striate-punctate in their basal half, much smoother beyond; thoracic teeth short (almost obsolete in *A. varicornis*) . . . Species 26–28.

Thorax very strongly constricted behind, greatly rounded and dilated before the middle, and the sides at this part somewhat sharply separated from the flanks, the latter concave; apical joint of the maxillary palpi very broad; elytra elongate-parallel, a little flattened below the base; species large (=subg. *Ischyropalpus*, La Ferté) . . . . . Species 29.

Thorax trapezoidal (widest in front and obliquely narrowing to the base); elytra without post-basal depression, or, at most, a little flattened below the base.

Elytra more or less rounded at the sides, subovate, the humeri rounded or obtuse and not prominent; upper surface finely and thickly pubescent; species small or very small.

Elytra unicolorous . . . . . Species 30, 31.

Elytra with definite markings . . . . . Species 32, 33.

Elytra more parallel and with prominent humeri; upper surface very sparsely pubescent and more shining; species moderately large. Species 34–37.

Thorax subcampanulate or subovate (rounded at the sides anteriorly and moderately constricted behind the middle, in some species dilated at the base); elytra without post-basal depression *, or, at most, a little flattened below the base.

Head rounded at the sides behind.

Pubescence very long, coarse, and erect; punctuation very coarse. Species 38.

Pubescence very much shorter and decumbent; punctuation much finer . . . . . Species 39, 40.

Head truncate at the base.

Elytra spotted or with definite markings.

Species large.

Thorax moderately convex . . . . . Species 41–44.

Thorax flattened on the disc . . . . . Species 45.

Species very small . . . . . Species 46.

Elytra unicolorous or without definite markings.

Pubescence extremely short, scaly; thorax long, subovate; elytra rather narrow . . . . . Species 47.

Pubescence longer and finer; thorax short, subquadrate or subcampanulate; elytra comparatively broad and elongate Species 48–50.

* Except in *A. currax*.

1. **Anthicus albicinctus.**

Anthicus albicinctus, La Ferté, Monogr. Anthic. p. 111[1].
Anthicus sallei, La Ferté, in litt.

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*); Guatemala, Chacoj in the Polochic valley (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Peña Blanca (*Champion*).—Colombia; Venezuela, Cumana[1], Caracas, &c.

In this peculiar little species the thorax has a deep transverse groove extending completely across the narrowest part, the anterior portion being globose and the posterior portion subparallel; and the elytra have a very deep and large post-basal depression, the space in front of this on either side of the suture being much swollen. The insect is brownish-black or dark reddish-brown in colour, the elytra with a flavous ashy-pubescent transverse fascia occupying the basal depression; the upper surface is very shining, with only a few very widely scattered fine punctures, the punctures each bearing a long erect hair; the head is transverse, the eyes rather large; the antennæ are distinctly thickened outwardly and somewhat clavate, and have the four or five basal joints testaceous and the others piceous-brown or black; the legs are piceous or brownish, with the tarsi more or less testaceous. The male has the fifth ventral segment very deeply triangularly emarginate.

Our specimens are blacker in colour than those contained in the La Ferté collection, in which both sexes are represented. A specimen from Caracas in the La Ferté collection is labelled *A. sallei*, mihi, ined.

A. gibbicollis, La Ferté, from Venezuela, is an allied species, not yet received from within the limits of our fauna.

2. **Anthicus bituberculatus.** (Tab. X. figg. 2; 2 *a*, profile.)

Anthicus omoplatus, Deyr. in litt.

Moderately elongate, black or brownish-black, the head, prothorax, and base of the elytra sometimes pitchy-red, the elytra with a transverse ashy-pubescent testaceous or yellowish fascia (not reaching the suture and sometimes indistinct) occupying the post-basal depression; the entire upper surface very shining and furnished with widely scattered long erect hairs. Head nearly as long as broad, rounded at the sides behind, shallowly and irregularly punctured and clothed with fine greyish pubescence in front, smooth and glabrous posteriorly, the eyes moderately large, the palpi piceous; antennæ with the apical four joints widened, joints 9–11 wider than 8, 1–4 or 1–5 flavous or testaceous, the rest black; prothorax very much narrower than the head, longer than broad, very strongly constricted at the sides behind the middle and with a transverse groove extending across the disc in the narrowest part, the anterior portion globose and strongly gibbous, the posterior portion very short and not swollen, the base feebly margined, the flanks very deeply excavated, the surface with a few fine widely scattered punctures; elytra rather short, widest about the middle and narrowing in front, with a very deep transverse post-basal depression, and somewhat gibbous behind this, the basal portion on either side of the suture conically raised in both sexes, the humeri prominent, the surface smooth or with irregular rows of fine shallow punctures towards the base; legs piceous or brownish, the tarsi more or less testaceous; fifth ventral segment deeply triangularly depressed in the middle behind and the apex emarginate in the male.

Length $2\frac{1}{4}$–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO, Teapa (*coll. Oberthür*); GUATEMALA, Paso Antonio (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

Ten examples. Closely allied to *A. albicinctus*, from which it may be at once separated by the prominent conical elevation on either side of the base of the elytra (this is very distinct when the elytra are viewed from behind or from the side). The head is less transverse; the transverse groove of the thorax is shallower (the narrow basal portion appearing less raised); and the elytra sometimes have irregular rows of fine shallow scattered punctures towards the base. The male, as in the same sex of *A. albicinctus*, has the fifth ventral segment emarginate.

A. vinculatus, La Ferté, from Cumana, has the elytra somewhat similarly tuberculate at the base; this species, however, has a very differently shaped thorax.

3. **Anthicus clavicornis.** (Tab. X. figg. 3; 3 *a*, profile.)

Moderately elongate, black or brownish-black, the head or the head and prothorax sometimes pitchy-red, the elytra each with a transverse flavous fascia below the base (occupying the basal depression, and sometimes nearly extending to the suture and to the lateral margin); the upper surface very shining and with a few fine widely scattered erect hairs. Head as long as or longer than broad, convex, rounded at the sides behind, very sparsely and finely punctured and clothed with fine longitudinally arranged appressed pubescence, the eyes very prominent, the palpi varying in colour from piceous-brown to fusco-testaceous; antennæ distinctly clavate, the apical three joints considerably widened, joints 1–3 or 1–4 flavo-testaceous, the rest black; prothorax a little longer than broad, narrower than the head, strongly gibbous anteriorly, the sides rounded before and deeply constricted behind the middle and thence to the base straight (in some specimens one or two very short teeth are visible at the broadest part, and the sides in these appear to be more angularly dilated), the flanks with a short but deep excavation, the base finely margined, the disc (viewed laterally) cylindrical and uninterrupted behind and abruptly declivous in front, the surface very finely and very sparsely punctured; elytra rather short, rounded at the sides about the middle and narrowing in front, obtuse behind, with a deep transverse post-basal depression and convex or almost gibbous behind this, the basal portion slightly swollen, the humeri prominent, the surface distinctly striate-punctate to about one-third from the base and thence to the apex obsoletely so or almost smooth; legs piceous, the femora usually paler at the base, the tarsi flavous, the femora distinctly clavate; fifth ventral segment broadly and shallowly emarginate in the male.

Length $1\frac{3}{4}$–$2\frac{1}{4}$ millim. (♂ ♀.)

Hab. MEXICO, Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, Rio Naranjo, Zapote, Chacoj (*Champion*).

Nine examples. This insect inhabits both the Atlantic and Pacific slopes of Guatemala, extending along the Atlantic slope northwards to S. Mexico. It has much the facies of *A. albicinctus* and *A. bituberculatus*, from either of which the very differently formed thorax at once distinguishes it: in *A. clavicornis* the disc is not interrupted by a transverse groove. The eyes are very prominent; the antennæ are clavate; the thorax is strongly gibbous in front; the elytra are short and convex, and have a deep post-basal depression, the depression occupied by a flavous fascia, the surface striate-punctate towards the base. The head is partly clothed with long, fine, appressed pubescence, and appears at first sight to be longitudinally strigose. The thorax usually has one or

two very short indistinct teeth at the widest part. The hind tibiæ are simple in both sexes. *A. clavicornis* is perhaps nearest allied to *A. vinculatus*, La Ferté, from which it may be easily recognized by the clavate antennæ, the more prominent eyes, the more gibbous anterior portion of the thorax, and the non-tuberculate elytra. *A. impressipennis*, La Ferté, from Texas, the type of which is not contained in this author's collection, is apparently an allied species, but differs in being more elongate &c.; this insect was unknown to Leconte.

4. **Anthicus dromedarius.** (Tab. X. figg. 4; 4 *a*, profile.)

Anthicus dromedarius, La Ferté, Monogr. Anthic. p. 114[1].

Hab. Mexico, Huatusco, Cordova (*Sallé*), Jalapa (*Höge*), Teapa in Tabasco (*Sallé*, *H. H. Smith*); Guatemala, El Tumbador, Rio Naranjo, Coatepeque, Capetillo, Zapote, San Gerónimo, San Joaquin, Chacoj, Senahu (*Champion*); Nicaragua (*Sallé*), Chontales (*Janson*).—Venezuela, Cumana[1].

A. dromedarius, La Ferté, described from a single abraded example, is one of the commonest species of the genus in Central America. Our specimens vary in colour from black to castaneous, the head and prothorax being often more or less reddish; the elytra have a transverse fascia of variable size a little below the base (in some examples occupying the whole of the base) and an oblique one (rarely reaching the suture) below the middle, and the base on either side of the scutellum, testaceous or flavous; the legs vary in colour from pitchy-brown to flavo-testaceous, but the tibiæ are invariably dark (a character particularly mentioned by La Ferté, and especially noticeable in light-coloured examples); the antennæ have usually the outer joints piceous or brownish and the basal joints testaceous, in one or two examples, however, they are entirely testaceous. The head and thorax are densely and minutely punctured (more sparsely so in some examples), the former usually smoother and more shining behind; the head is rather long, rounded at the sides behind, the eyes large; the thorax is transversely convex anteriorly and strongly constricted behind the middle; the elytra are very shining and almost smooth, and have a very deep transverse post-basal depression, the basilar portion being tubercularly raised on either side of the suture and the humeri swollen and prominent, the depression (which is usually more than covered by the transverse fascia) clothed with fine ashy pubescence and the oblique post-median fascia also finely pubescent.

The darkest specimens have the femora, as well as the tibiæ, piceous. In the male the fifth ventral segment is broadly triangularly depressed in the middle behind, and the apex is truncate.

The examples from Chacoj and Senahu agree exactly with La Ferté's type from Cumana, with which I have compared them; the type is a male.

Labelled *A. gibbicollis*, Deyr., in the Sallé and other collections.

5. **Anthicus punctatissimus.**

Elongate, ferruginous, subopaque; the elytra shining, fulvo-testaceous, each with an indeterminate transverse or oblong brownish median patch (not reaching the lateral margin and distant from the suture), the apex in one example darker; the upper surface very finely pubescent. Head not very convex, as long as broad, rounded at the sides behind, very densely and minutely punctured, the eyes small, finely granulated, and not prominent; antennæ slender, entirely testaceous; prothorax longer than broad, a little narrower than the head, rounded at the sides before and strongly constricted behind the middle, the anterior portion transversely convex, the posterior portion cylindrical, the flanks deeply excavated, the base finely margined, the surface sculptured like that of the head; elytra moderately long, somewhat rounded at the sides about the middle, subparallel and narrower anteriorly, with a deep post-basal depression and convex beyond this, the basilar portion gibbous on either side of the suture, the humeri rather prominent, the surface densely and minutely punctured throughout; legs entirely testaceous; fifth ventral segment deeply triangularly depressed in the middle behind and the apex truncate, and the posterior tibiæ slightly sinuate, in the male.

Length $2\frac{2}{3}$ millim. (♂.)

Hab. Mexico, near the city (*Höge*).

Two male examples, both abraded. The densely and minutely punctured elytra distinguishes this species at once from *A. dromedarius*. The depression on the fifth ventral segment is deeper and narrower than in the same sex of that insect, and the head is more finely and more densely punctured. The elytral markings are indistinct; they show a tendency to assume the pattern of *A. dromedarius*.

A mutilated specimen from Chilpancingo probably belongs to the same species.

6. **Anthicus septemnotatus.** (Tab. X. figg. 5; 5 *a*, profile.)

Elongate, piceous or piceo-ferruginous, subopaque; the elytra shining, piceous or piceous-brown, with a rather large spot on either side of the scutellum at the base, an oblique angulated stripe below the shoulders (variable in size—sometimes extending to the suture and continued along it to the basal spot, sometimes reduced to a lateral spot), a broad oblique stripe considerably beyond the middle (sometimes confluent with the opposite one at the suture, sometimes not reaching it), and a common apical patch, flavo- or fulvo-testaceous; the upper surface clothed with short, widely scattered, erect hairs. Head large, broader than long, a little dilated at the sides behind, finely rugulose, dull, the eyes large, coarsely granulated, and rather prominent; antennæ testaceous, the apical three joints more or less infuscate; prothorax longer than broad, narrower than the head, rounded at the sides before and strongly constricted behind the middle, the anterior portion transversely convex, the posterior portion cylindrical, the flanks deeply excavated, the base obsoletely margined, the surface finely rugulose; elytra moderately long, parallel in front, a little dilated at the middle, with a deep post-basal depression and somewhat convex beyond this, the basilar portion gibbous on either side of the suture, the humeri rather prominent, the surface sparsely, finely, and confusedly punctured (the punctuation denser in the post-basal depression and finer at the apex); legs rather stout, the apical half of the femora and the base of the tibiæ more or less infuscate; fifth ventral segment triangularly depressed in the middle behind, and the apex truncate, in the male.

Length $2\frac{3}{4}$–3 millim. (♂ ♀.)

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*); Guatemala, El Tumbador, Volcan de Atitlan, Zapote (*Champion*).

Seven examples. The shining and sparsely punctured elytra distinguishes this insect at a glance from *A. quinquemaculatus* and its allies; the more elongate shape, larger size, and very distinct elytral punctuation separate it from *A. dromedarius*.

7. **Anthicus quinquemaculatus.** (Tab. X. fig. 6.)

Anthicus quinquemaculatus, La Ferté, Monogr. Anthic. p. 115 [1].
Anthicus variegatus, La Ferté, in litt.

Hab. Mexico, Cordova (*Sallé*), Yucatan (*coll. Oberthür*); Guatemala, Yzabal (*Sallé*), Chacoj (*Champion*); Panama, Volcan de Chiriqui (*Champion*).—Brazil (*Mus. Brit.*; *coll. Oberthür*), Bahia [1].

Our specimens agree exactly with La Ferté's description and type, except as regards the form and sculpture of the head. From a careful examination of the type, I have not the slightest doubt that the head (which is detached and gummed down separately) does not belong to the specimen described, and that it appertains to a totally different species. A renewed description is given from the Central-American examples:—

Elongate, ferruginous, opaque; the elytra testaceous or flavo-testaceous, with an oblique humeral patch, a common transverse median fascia (widened at the suture and laterally), and a narrow anteapical fascia (formed by an oblique stripe on each elytron, these being confluent at the suture and extending up it to the median fascia), piceous or piceous-brown; the upper surface clothed with very short, fine, silky pubescence, and with a few widely scattered short erect hairs. Head transverse, broad, somewhat dilated at the sides behind, moderately convex, finely rugulose and opaque throughout, the eyes large, coarsely granulated, and prominent; antennæ about reaching the base of the prothorax, rather slender, testaceous, the apical three joints slightly infuscate; prothorax narrower than the head, longer than broad, rounded at the sides before, and strongly constricted behind the middle, the anterior portion transversely convex, the posterior portion subcylindrical, the flanks with a deep oblique excavation (scarcely visible from above), the base very finely margined, the neck very sharply defined, the surface finely rugulose, the disc in some specimens obsoletely canaliculate behind; elytra moderately long, the sides a little rounded about the middle, parallel and narrower anteriorly, broadly transversely depressed below the base and feebly convex beyond this, the basilar portion very little swollen, the humeri rather prominent, the surface very densely and minutely punctured; beneath ferruginous; legs entirely testaceous; fifth ventral segment truncate and with an exceedingly deep triangular excavation in the middle behind (extending forwards nearly to the apex of the preceding segment) in the male.
Length $2\frac{2}{3}$ millim. (♂ ♀.)

Eight examples. If piceous be taken as the ground-colour, the elytra may be said to have a broad oblique fascia before and another behind the middle (the latter not reaching the suture, and the former extending up it to the base), and a common apical patch, flavo-testaceous. The excavation in the middle of the fifth ventral segment in the male is very sharply defined. The following two species are closely allied.

8. **Anthicus concinnus.** (Tab. X. fig. 7, var.)

Anthicus concinnus, La Ferté, Monogr. Anthic. p. 115 [1].

Hab. Guiana, Cayenne [1]; Brazil, Bahia [1].

var.

Closely allied to *A. quinquemaculatus*; the head, eyes, antennæ, and prothorax as in that species, the head and prothorax sometimes in great part piceous; the elytra similarly sculptured, the piceous colour more extended—the median fascia more sharply angulated and only separated from the more extended oblique humeral stripe (this being sharply excised on its lower edge below the shoulders) by a **W**-shaped mark of

the testaceous ground-colour, the ante-apical fascia shaped as in *A. quinquemaculatus* but usually more extended; legs testaceous, the apices of the femora often infuscate; fifth ventral segment unimpressed, truncate at the apex, and the apex furnished with a short tooth on either side of the middle, in the male.

Length $2\frac{2}{3}$ millim. (♂ ♀.)

Hab. British Honduras, Belize (*Blancaneaux*); Nicaragua, Chontales (*Janson*).—South America, Santiago (*coll. La Ferté*).

Six examples received from Central America agree very nearly with La Ferté's description and types of *A. concinnus*, except as regards the colour of the apex of the elytra. In La Ferté's collection, however, there is a specimen (not mentioned in his work) placed under this name (labelled as from Santiago *) similar to the Central-American examples. I accordingly treat these as a variety of the same species. In the type of *A. concinnus* the entire apex of the elytra is piceous; in the variety the piceous colour is less extended and in the form of an oblique ante-apical fascia.

9. **Anthicus pulchellus.** (Tab. X. fig. 8.)

Moderately elongate, ferruginous, opaque; the elytra rather shining, piceous, with a common angulated transverse fascia below the base (extending upwards along the suture and connected with a small basal spot), a narrow curved oblique stripe beyond the middle (not reaching the suture), and a small apical patch (from which a short somewhat oblique branch usually extends upwards on either side of the suture), testaceous; the upper surface clothed with very short, fine, silky, appressed pubescence and with rather numerous erect bristly hairs, those on the elytra serially arranged. Head strongly transverse, somewhat dilated at the sides behind, moderately convex, finely rugulose and opaque throughout, the eyes large and prominent; antennæ testaceous, the apical three joints infuscate and a little wider than the others; prothorax longer than broad, narrower than the head, rounded at the sides before and strongly constricted behind the middle, the anterior portion transversely convex, the posterior portion subcylindrical, widened a little at the base externally, the flanks with a deep groove, the base obsoletely margined, the surface finely rugulose; elytra rather short, the sides somewhat rounded about the middle, subparallel and narrower anteriorly, rather deeply transversely depressed below the base and moderately convex beyond this, the basilar portion gibbous on either side of the suture, the humeri obtuse but rather prominent, the surface densely and minutely punctured, and with regular series (four on each elytron) of distinct scattered setiferous punctures extending from the base to the apex; legs entirely pale testaceous, the femora slightly clavate; fifth ventral segment truncate and slightly depressed in the middle behind in the male.

Length 2–$2\frac{1}{4}$ millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Numerous examples. Less elongate and much smaller than *A. quinquemaculatus* and *A. concinnus*; the anterior portion of the thorax less convex; the elytra more shining and with fine but very distinct series of setiferous punctures (in addition to, and very distinct from, the dense minute punctuation). The peculiar pattern of the elytra will be best understood from our figure: the testaceous mark on each elytron beyond the middle is narrower and much more oblique than in *A. concinnus*, and the apical patch is smaller and has a branch extending upwards on either side of the suture.

* There are many places of this name in Central and South America; the insect is probably not Chilian.

10. **Anthicus foveiventris.** (Tab. X. fig. 9, ♂.)

Elongate; the head reddish-testaceous, shining; the prothorax fusco-ferruginous, dull; the elytra rather shining, piceous, with a transverse testaceous fascia a little below the base and another beyond the middle, the suture very narrowly and the space beyond the second fascia brownish; the upper surface clothed with fine appressed pubescence, with scattered intermixed erect bristly hairs. Head broader than long, a little dilated at the sides behind, with a shallow occipital groove, very finely, shallowly, and closely punctured; the eyes black, coarsely granulated, large, rather prominent; antennæ moderately long, very stout, submoniliform, joints 9 and 10 transverse, 1–7 reddish-testaceous, 8–11 piceous-brown, the tip of the eleventh ferruginous; prothorax longer than broad, a little narrower than the head, rounded at the sides before and strongly constricted behind the middle, the anterior portion transversely convex, the posterior portion short and feebly dilated at the base externally, the base without distinct margin, the flanks moderately excavate, the surface finely rugulose, dull; elytra rather long, a little narrowed in front, with a deep transverse post-basal depression (occupied by the first fascia) and moderately convex beyond this, the humeri somewhat obtuse, the surface very finely and closely punctured; legs very stout (the femora especially), testaceous, the tibiæ in great part and the hind femora (except at the base) piceous, the four hinder tarsi fusco-testaceous; fifth ventral segment deeply foveate in the middle behind and emarginate on either side at the apex, the median portion angularly produced, and all the tibiæ slightly sinuate on their inner side, in the male.

Length 3 millim. (♂.)

Hab. GUATEMALA, El Reposo (*Champion*).

One male example, found in the Pacific coast-region.

This and the following species have the antennæ very stout and submoniliform, and the elytra piceous, with two testaceous, almost straight, transverse fasciæ. They are not closely allied to any others known as yet from Central or South America. In *A. foveiventris* the legs are very stout, the femora especially, and the transverse post-basal depression of the elytra is deep; the male has all the tibiæ a little sinuous on their inner edge and somewhat dilated, and the last ventral segment very deeply foveate in the middle.

11. **Anthicus crassicornis.**

Very closely resembling *A. foveiventris*, and differing only as follows:—The antennæ shorter, a little more slender towards the base, and with joints 7–10 transverse; the elytra proportionately narrower, less densely pubescent, and not so closely punctured; the legs not so stout, the anterior and intermediate femora also infuscate in their outer half; all the tibiæ slightly sinuate within, the hind pair distinctly curved (not straight) without, and the fifth ventral segment truncate at the apex and unimpressed, in the male.

Length 3 millim. (♂.)

Hab. GUATEMALA, San Gerónimo (*Champion*).

One male example. This insect so exactly resembles the preceding at first sight as to appear indistinguishable from it; the form of the fifth ventral segment in the male is, however, totally different from that of the same sex of *A. foveiventris*, and this peculiarity is accompanied by the other above-mentioned less important points of distinction. Owing to the more strongly transverse penultimate joints and the rather less stout basal ones, the antennæ appear to be more widened outwardly than in *A. foveiventris*; the hind tibiæ in the male are distinctly curved outwardly in *A. crassicornis*, the outer edge being almost straight in *A. foveiventris*.

12. **Anthicus dilatipes.** (Tab. X. fig. 10, ♂.)

Elongate, shining, finely and sparsely pubescent, the head and prothorax reddish-testaceous, the elytra piceous. Head strongly transverse, a little rounded at the sides behind, sparsely and very minutely punctured; the eyes large and prominent, black; antennæ moderately long, testaceous; prothorax longer than broad, narrower than the head, the sides very much constricted behind the middle and thence to the base parallel, the anterior portion transversely convex, the posterior portion cylindrical, the flanks deeply excavated, the base feebly margined, the surface minutely and somewhat closely punctured; elytra long, widest at the middle, subparallel in front, with a very shallow transverse post-basal depression, sparsely and very finely punctured, the punctuation becoming very minute towards the apex; legs fusco-testaceous, the base of the femora and the tarsi testaceous, the femora moderately clavate; fifth ventral segment truncate, and the hind tibiæ on the inner side gradually dilated to beyond the middle and then abruptly narrowed and concave to the apex, in the male.

Length $2\frac{1}{3}$ millim. (♂.)

Hab. Mexico, Chilpancingo in Guerrero (*H. H. Smith*).

One male example. This species approaches *A. obscurus* and the allied forms, but differs from these in the strongly dilated posterior tibiæ in the male. The elytra have a very shallow post-basal depression, and the punctuation is fine and sparse.

13. **Anthicus obscurus.**

Anthicus obscurus, La Ferté, Monogr. Anthic. p. 116[1]; Lec. Proc. Acad. Phil. vi. p. 96[2].

Hab. North America, United States[1], Coney I.[2].—Mexico, Northern Sonora (*Morrison*).

This insect is, I believe, widely distributed in the United States. Three examples received from Sonora agree with one forwarded by Dr. Horn and with the types in the La Ferté collection. *A. obscurus* has the thorax and elytra more minutely punctured than in *A. occidentalis*; the elytra have a shallow post-basal depression, and are minutely and thickly punctured and finely pubescent; the head is minutely punctured, almost smooth, strongly transverse; the antennæ are piceous, with the basal two or three joints lighter. The head and thorax are sometimes reddish-brown. The posterior tibiæ are slightly sinuous within, and the fifth ventral segment is truncate, in the male.

14. **Anthicus occidentalis.**

Elongate, shining, varying in colour from fusco-testaceous to piceous, the head and prothorax often reddish, finely pubescent. Head short, transverse, rounded at the sides behind, minutely and somewhat thickly punctured (in some examples more obsoletely so), the eyes prominent and moderately large; antennæ long, testaceous, the three or four apical joints usually infuscate; prothorax longer than broad, narrower than the head, the sides very strongly constricted behind the middle and thence to the base almost straight, the anterior portion transversely convex, the posterior portion cylindrical, the flanks with a deep excavation, the base margined, the surface finely and closely punctured; elytra long, subparallel in their basal half, shallowly transversely depressed below the base and somewhat flattened beyond this, the humeri obtuse but rather prominent, the surface finely and somewhat closely punctured, the punctuation becoming coarser towards the base; legs testaceous or fusco-testaceous, the outer half of the femora sometimes darker, the femora clavate; fifth ventral segment truncate, and the posterior tibiæ slightly swollen and sinuous within, in the male.

Length $2\frac{1}{3}$–$2\frac{2}{3}$ millim. (♂ ♀.)

Hab. Mexico, Acapulco and Cuernavaca (*Höge*).

Var. The elytra more finely and more uniformly punctured, the punctuation becoming very little coarser towards the base.

Hab. GUATEMALA, near the city, San Joaquin (*Champion*).

The typical form was found in plenty by Herr Höge at Acapulco on the Pacific coast, and the variety in equal numbers by myself in the vicinity of the city of Guatemala. A single specimen from San Joaquin is somewhat intermediate, and some of the Acapulco examples are more finely punctured than others, so that I am quite unable to distinguish more than one species. *A. occidentalis* is almost intermediate between *A. obscurus*, La Ferté, and *A. nitidulus*, Lec.; but in the sculpture of the head and the shallow post-basal depression of the elytra it approaches more nearly to *A. obscurus*. The antennæ are testaceous, with the three or four apical joints, at most, infuscate; the elytra are less minutely and more sparsely punctured than in *A. obscurus*, finely and uniformly pubescent, and rather depressed. The head is much smoother than in *A. nitidulus*, and more transverse than in *A. asphaltinus*. The elytral punctuation is finer and more diffuse, and the pubescence is sparser than in *A. punctipennis*. The head and thorax have a brassy lustre in some of the Guatemalan specimens. *A. occidentalis* averages smaller in size than *A. nitidulus*.

15. **Anthicus aterrimus.**

Elongate, black, very shining, finely and very sparsely pubescent, the pubescence on the basal portion of the elytra denser and ashy in colour. Head strongly transverse, a little rounded at the sides behind, sparsely and minutely punctured, the eyes large and prominent; antennæ long, piceous, the four or five basal joints reddish-testaceous; prothorax much longer than broad, very convex, the sides very strongly constricted behind the middle and thence to the base almost straight, the anterior portion transversely convex, the posterior portion cylindrical, the flanks very deeply excavated, the base distinctly margined, the surface sparsely and minutely punctured; elytra long, widest at the middle, subparallel in front, with a rather deep post-basal depression and moderately convex beyond this, the humeri somewhat prominent, the surface sparsely and very minutely punctured, the punctuation closer and more distinct at the base, the pubescence transversely arranged in the depressed part; legs piceous, the femora testaceous at the base, the latter clavate; fifth ventral segment truncate, and the hind tibiæ rather stout and strongly sinuous within, in the male.

Length $2\frac{1}{2}$ millim. (♂.)

Hab. GUATEMALA, El Tumbador 2500 feet (*Champion*).

Two examples, both males, from the Pacific slope of Guatemala. This species resembles the Colombian *A. ebeninus*, La Ferté, in its very shining black colour and comparatively smooth surface; it differs from that insect (the types of which I have examined) in the longer thorax and the much deeper post-basal depression of the elytra; the hind tibiæ are stouter and more sinuous within, and the fifth ventral segment is unimpressed, in the male. The short, transverse head and the sparse and minute punctuation of the upper surface separate it from *A. asphaltinus*; the sparser punctuation of the thorax and elytra, the deeper post-basal depression of the latter, and the more shining surface distinguish it from *A. obscurus*, *A. occidentalis*, &c.

16. **Anthicus punctipennis.** (Tab. X. fig. 11.)

Elongate, black or brownish black, the head in some examples pitchy-red and the prothorax sometimes piceous-brown; finely and sparsely pubescent, the basal half of the elytra with long, dense, appressed, ashy pubescence; the upper surface (when denuded of pubescence) moderately shining. Head large, transverse, rounded at the sides behind, not very convex, densely and finely punctured; the eyes large and prominent; last joint of the maxillary palpi very broad; antennæ long, thickening a little outwardly, piceous or piceous-brown, the three basal joints testaceous; prothorax considerably longer than broad, narrower than the head, the sides rounded before and very strongly constricted behind the middle, and thence to the base almost straight, the anterior portion transversely convex, the posterior portion cylindrical and very little dilated laterally at the base, the flanks with a very deep groove, the base finely margined, the surface very densely and finely punctured; elytra long, subparallel to about the middle, broadly transversely depressed below the base and moderately convex beyond this, the humeri obtuse but prominent, the entire surface very closely and finely punctured, the punctuation on the basal portion very dense, the ashy pubescence transversely arranged in the depressed part and obliquely or longitudinally so before and behind this, the pubescence beyond the middle much darker and very much sparser and finer; legs varying in colour from piceous to piceous-brown, the femora more or less testaceous at the base and sometimes entirely fusco-testaceous; the femora distinctly clavate; fifth ventral segment truncate, and the hind tibiæ slightly sinuate on the inner side, in the male.

Length 2½–3 millim. (♂ ♀.)

Hab. MEXICO, Guajuco in Nuevo Leon (*Dr. Palmer*), Chilpancingo in Guerrero (*H. H. Smith*), Guanajuato, Cordova (*Sallé*); GUATEMALA, near the city (*Salvin, Champion*), Zapote, Dueñas, San Gerónimo (*Champion*); NICARAGUA (*Sallé*), Chontales (*Janson*).—VENEZUELA, Caracas (*coll. Oberthür*).

A widely-distributed and rather common species on the plateau of Central America, and extending southwards to Venezuela. *A. punctipennis* has quite the facies and colour of *A. bactrianus* and *A. tumidicollis*, but differs from both in the thorax not being gibbous behind; the dense punctuation of the elytra, more particularly of the basal portion, and the dense appressed whitish pubescence of the latter distinguish the species from the North-American *A. obscurus*, La Ferté, and *A. nitidulus*, Lec. (typical examples of which are before me), and from the other allied forms here described. The anterior portion of the elytra is duller than the rest of the surface, the punctuation being very dense on this part; the basal portion is transversely convex and without distinct swelling near the suture. The head in some specimens is pitchy-red, but in a long series the elytra show no tendency, as in some of the allied forms, to have the basal portion reddish.

17. **Anthicus asphaltinus.** (Tab. X. fig. 12.)

Of the same form and colour as *A. punctipennis* and differing as follows:—The head longer and narrower, the sides behind the eyes obliquely converging and less rounded, the surface more finely and less densely punctured (in some examples almost smooth); the antennæ piceous-brown, with three or more of the basal joints testaceous, sometimes almost entirely testaceous; prothorax a little more dilated laterally at the base, rather narrower than the head, not quite so densely punctured; elytra less parallel, widest at the middle and somewhat ovate, the post-basal depression deeper, the punctuation fine and sparse, and closer and coarser on the basal portion; the entire upper surface more shining, and very sparsely and finely pubescent, the pubescence not transversely arranged on the depressed part; the male characters as in *A. punctipennis*.

Length 2½–3 millim. (♂ ♀.)

Hab. Mexico, Amula, Xucumanatlan, and Chilpancingo in Guerrero (*H. H. Smith*), Cordova (*Sallé*), Cerro de Plumas (*Höge*); Guatemala, near the city, San Gerónimo (*Champion*).

Var. The head, the prothorax, and the shoulders of the elytra more or less reddish-brown.

Hab. Mexico, Guanajuato (*Sallé, Dugès*).

Numerous examples of the typical form, three of the variety. The more ovate head, the more shining surface, and the much more diffuse punctuation and the sparse pubescence of the elytra distinguish this insect at once from *A. punctipennis*. The much less transverse head separates it from *A. obscurus*, La Ferté, *A. occidentalis*, and other allied forms. The punctuation of the head is fine and rather dense, but in some examples is almost obsolete. In a long series of specimens the elytra vary a little in the intensity of the punctuation and in the depth of the post-basal depression, this latter being scarcely visible in one male example.

18. **Anthicus bactrianus.** (Tab. X. figg. 13, ♂; 13 *a*, profile.)

Elongate, black or brownish-black, the head and prothorax in one example pitchy-red, shining; the head and prothorax sparsely, the elytra more thickly, clothed with fine decumbent pubescence, the pubescence on the elytra ashy in tint at the base. Head broader than long, moderately convex, rounded at the sides behind, thickly and not very finely punctured, the eyes large and prominent; the last joint of the maxillary palpi very broad; antennæ long, very gradually and only a little thickened outwardly, piceous or piceous-brown, the basal joints lighter; prothorax much longer than broad, narrower than the head, the sides rounded before and very strongly constricted behind the middle and thence to the base almost straight, the anterior portion convex, the posterior portion rather long and strongly and abruptly gibbous, the flanks with a very deep excavation extending upwards, the base finely margined, the disc thickly and finely punctured, the sides smooth; elytra long, subparallel to about the middle, broadly transversely depressed below the base and moderately convex beyond this, the basal portion finely and rather densely, the rest of the surface more shallowly and sparsely, punctured, the humeri obtuse but somewhat prominent; legs varying in colour from piceous to fusco-testaceous, the tarsi not lighter than the femora or tibiæ, the femora distinctly clavate, the spurs of the hind tibiæ long; fifth ventral segment truncate, and the hind tibiæ slightly sinuate on the inner side, in the male.

Length $2\frac{1}{2}$–$2\frac{3}{4}$ millim. (♂ ♀.)

Hab. Mexico, Cerro de Plumas (*Höge*), Guanajuato (*Sallé*); Guatemala, Quiche Mountains, Capetillo, Santa Rosa in Vera Paz (*Champion*).

Nine examples. This insect resembles *A. obscurus*, La Ferté, and *A. nitidulus*, Lec., from both of which it differs in having the posterior portion of the thorax strongly gibbous and raised very much above the level of the convex anterior portion, the space between the two very deeply excavate at the sides. No species possessing this peculiarity was known to La Ferté. The last joint of the maxillary palpi is largely developed, and the spurs of the hind tibiæ are very distinct. *A. bactrianus* appears to be confined to Mexico and the highlands of Guatemala; the following species comes very near it.

19. **Anthicus tumidicollis.**

Closely allied to *A. bactrianus*. The head much more sparsely and less distinctly punctured, and more shining; the posterior portion of the prothorax less strongly gibbous and not so abruptly raised in front (viewed

laterally, the disc appears to be very little depressed between the anterior and posterior portions), the excavation in the flanks not so deep; the rest, including the male characters, as in *A. bactrianus*.

Length 2½ millim. (♂.)

Hab. PANAMA, Peña Blanca 2000 feet (*Champion*).

Two male examples. In the form of the thorax this insect is somewhat intermediate between *A. bactrianus* and *A. obscurus* and its allies. The posterior portion of the thorax is raised above the level of the anterior portion, but is more rounded and less conically elevated than in *A. bactrianus*.

20. **Anthicus californicus.**

Anthicus californicus, La Ferté, Monogr. Anthic. p. 128[1]; Lec. Proc. Acad. Phil. vi. p. 97[2]; Casey, Bull. Brooklyn Ent. Soc. vii. p. 66[3].

Hab. NORTH AMERICA, Delaware[3], New Jersey[3], Texas, California[1], San Diego[2].—MEXICO (*coll. Oberthür*), Manzanillo (*Höge*), Guanajuato (*Sallé*, *Dugès*), Mexico city (*Höge*, *H. H. Smith*).

We have received four examples of this species from within the limits of our fauna, two of the typical form and two of the var. β; others from Mexico are also contained in the collection of M. Réné Oberthür. These agree well with La Ferté's types. The insect appears to be widely distributed in the United States. *A. californicus* is an ally of the European *A. humilis*, Germ., and equally variable in colour; the head is about as long as broad; the thorax is strongly constricted behind, obsoletely bituberculate in the middle at the base, and very distinctly punctured, the punctuation becoming denser towards the base; the elytra are long, without post-basal depression, and closely and rather coarsely punctured; the upper surface is shining and sparsely pubescent. The locality "California" requires confirmation.

21. **Anthicus invalidus.** (Tab. X. fig. 14.)

Anthicus invalidus, La Ferté, Monogr. Anthic. p. 136[1].

Two specimens of this species are contained in the La Ferté collection: one, the type, from Colombia, is in a very mutilated condition and without antennæ; the other, from Panama, labelled *A. albicornis*, Motsch., is not mentioned by the author in his monograph. We give a fresh description from the additional examples captured by myself in Guatemala; these differ from La Ferté's definition of the species in having a distinct post-basal depression to the elytra.

Elongate, reddish-testaceous or ferruginous, very shining; the elytra with the base rather broadly and a common transverse fascia just beyond the middle piceous or brownish, sometimes with only a large spot at the shoulders and another at the sides at the middle brownish; the upper surface clothed with long erect, scattered hairs, those on the elytra serially arranged. Head nearly as long as broad, rounded at the sides behind, foveate on each side in front and with a few widely scattered fine, deep punctures; the eyes black, coarsely granulated, large and prominent; antennæ long and slender, the apical three or four and the two basal joints testaceous or flavo-testaceous, the others black or piceous, the apical joint acumi-

nate and rather long; prothorax longer than broad, narrower than the head, rounded at the sides before and strongly constricted behind the middle, the anterior portion transversely convex, the posterior portion a little dilated at the base externally, the base distinctly margined, the flanks deeply excavated, the surface with rather coarse, deep, very widely scattered punctures; elytra broadly truncate at the base, moderately long, the sides subparallel in front, a little dilated at the middle, and obliquely converging behind, moderately convex, and with a shallow quite distinct transverse post-basal depression, the humeri obtuse but distinct, the basal fourth with rather coarse scattered punctures, the rest of the surface almost smooth; legs pale testaceous, the tibiæ usually infuscate in their basal half; fifth ventral segment deeply semicircularly emarginate in the male.

Length 2½–2⅔ millim. (♂ ♀.)

Hab. Guatemala, Rio Naranjo, San Joaquin, Lanquin, Chiacam (*Champion*); Panama (*coll. La Ferté*).—Colombia [1] (*coll. Oberthür*).

A. invalidus has much the facies of *A. varicornis* and *A. striato-punctatus*, from which it may be at once distinguished by the simply rounded (not denticulate) sides of the thorax; the antennæ are differently coloured; the elytra are more obliquely narrowed behind and the punctuation is more irregularly arranged and scarcely extends beyond the basal depression.

This insect frequents the sandy banks of rivers and occurs on both the Atlantic and Pacific slopes of Guatemala.

22. **Anthicus concolor.** (Tab. X. fig. 15.)

Moderately elongate, pale castaneous, very shining; the upper surface clothed with long, erect, scattered hairs, those on the elytra serially arranged. Head about as long as broad, rounded at the sides behind, with a few very widely scattered minute punctures; the eyes black, comparatively large, coarsely granulated, prominent; antennæ entirely testaceous, slender, the apical joint acuminate and comparatively long; prothorax longer than broad, much narrower than the head, rounded at the sides before and strongly constricted behind the middle, the anterior portion transversely convex, the posterior portion dilated at the base externally, the base margined, the flanks deeply excavated, the surface punctured like that of the head; elytra broad, comparatively short, gradually widening to about the middle and there more than three times the width of the prothorax, slightly compressed behind the shoulders, and obliquely converging behind, broadly truncate at the base, the disc flattened anteriorly and moderately convex behind, without post-basal depression, the humeri prominent, the surface with very minute widely-scattered punctures; legs long and slender, entirely testaceous.

Length 2 millim. (♀.)

Hab. Guatemala (*Sallé*), Rio Naranjo (*Champion*).

Four female examples of this insect were captured by myself on the sandy banks of the Rio Naranjo, in the Pacific coast-region of Guatemala, and there is a very immature example of it in the Sallé collection. The unicolorous, very shining, almost smooth surface, slender limbs, and comparatively broad, short elytra, the latter merely flattened on the basal portion of the disc, and with the humeri very prominent, chiefly distinguish *A. concolor*.

23. **Anthicus festivus.**

Moderately elongate, pale castaneous, very shining; the elytra with an indistinct brownish median fascia; the upper surface clothed with long, erect, scattered hairs, those on the elytra serially arranged. Head as

long as broad, rounded at the sides behind, with a few very widely scattered minute punctures; the eyes black, large, moderately prominent; antennæ submoniliform, short, about reaching the base of the prothorax, the apical three joints distinctly wider than the preceding, the tenth transverse, joints 1–3 and 10 and 11 testaceous, the others piceous-brown; prothorax longer than broad, narrower than the head, rounded at the sides before and strongly constricted behind the middle, the anterior portion transversely convex, the posterior portion subcylindrical, the base distinctly margined, the flanks deeply excavated, the surface punctured like that of the head; elytra moderately long, a little narrowed in front, somewhat obliquely narrowing behind, transversely flattened anteriorly and rather convex beyond, without post-basal depression, the humeri obtuse, the surface with a few widely scattered minute punctures, almost smooth; legs testaceous, the tibiæ slightly infuscate.

Length $1\frac{3}{4}$ millim.

Hab. Mexico, Cordova (*Sallé*).

One example, apparently a male. Narrower and smaller than *A. concolor*; the elytra more ovate and with less prominent shoulders; the antennæ differently coloured, much shorter and more moniliform, and with the apical three joints distinctly widened, the tenth being transverse (instead of longer than broad) and the eleventh shorter. Very much smaller than *A. invalidus*, La Ferté, the elytra not coarsely punctured towards the base, the antennæ much shorter, &c.

24. **Anthicus isthmicus.** (Tab. X. fig. 16.)

Moderately elongate, reddish-testaceous or ferruginous, very shining; the elytra with a broad yellowish transverse median fascia, the fascia preceded and followed and sometimes interrupted at the suture by an indeterminate piceous-brown cloud; the upper surface clothed with fine, scattered, long, erect yellowish hairs, those on the elytra serially arranged. Head about as long as broad, rounded at the sides behind, with a few widely scattered fine punctures, the eyes black and rather prominent; antennæ moderately long, very little thickened outwardly, piceous, the basal joint (and sometimes the second also) testaceous, the apical two or three joints flavous, the eleventh acuminate; prothorax longer than broad, narrower than the head, rounded at the sides before and strongly constricted behind the middle, the anterior portion transversely convex, the posterior portion subcylindrical, slightly dilated at the base externally, the flanks deeply excavated, the base finely margined, the surface punctured like that of the head; elytra short, ovate, regularly convex, without trace of a post-basal depression, the sides compressed just below the shoulders, the base subtruncate, the apex broadly rounded, the humeri obtuse but distinct, the basal third with very distinct serially arranged punctures, the rest of the surface almost smooth; legs testaceous, the basal two-thirds of the tibiæ piceous or infuscate, the femora slender; fifth ventral segment truncate at the apex in the male.

Length $1\frac{7}{8}$–2 millim. (♂ ♀.)

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Numerous examples. In its ovate elytra without trace of post-basal depression, this curious little species approaches the genus *Formicomus*, but it seems to be best placed in *Anthicus*. The general shape is somewhat that of *A. clavicornis*, &c.

25. **Anthicus spinicollis.** (Tab. X. fig. 17.)

Anthicus (*Acanthinus*) *spinicollis*, La Ferté, Monogr. Anthic. p. 138, t. 27. fig. 21[1].

Anthicus nigrosignatus, Deyr. in litt.

Hab. Mexico (*coll. Oberthür*), Colima city, Vera Cruz, Frontera in Tabasco (*Höge*),

Atoyac in Vera Cruz and Teapa in Tabasco (*H. H. Smith*); British Honduras, Belize, R. Hondo (*Blancaneaux*); Guatemala, Cahabon and San Juan in Vera Paz, Zapote (*Champion*).—Colombia; Amazons; Brazil [1].

Not uncommon in the warmer parts of Central America, more particularly on the Atlantic slope. Allied to *A. æquinoctialis*, La Ferté, from which it differs in having the elytra closely and confusedly punctured from the base to the apex (the punctures becoming a little coarser towards the base). The head and thorax are duller and more finely rugulose; the head is more angularly extended at the sides behind; the thorax has the lateral tooth sharper and longer, this tooth usually preceded and followed by a shorter one, each tooth bearing a long projecting bristly hair; and the elytra have a transverse subangular black median fascia and a transverse anteapical one, these fasciæ connected along the suture.

Central-American specimens, of which about forty are before me, have the elytra a little more coarsely punctured than the La Ferté types, and the thoracic teeth less distinct. La Ferté's outline figure of the thorax is incorrect and misleading. One example, from Mexico, labelled *A. nigrosignatus*, Deyr., in M. Réné Oberthür's collection, has the elytra still more coarsely punctured; but with the extensive series before me I am unable to distinguish more than one species. Specimens of what is apparently an extreme form, from the Amazons, are separated in the La Ferté collection and labelled *A. longicornis*; these have the thoracic teeth almost obsolete. In one of the typical examples of La Ferté the thoracic teeth are much longer than in the others.

26. **Anthicus striato-punctatus.** (Tab. X. fig. 18.)

Anthicus (*Acanthinus*) *striato-punctatus*, La Ferté, Monogr. Anthic. p. 139 [1].
Anthicus punctatus, Moritz, in litt.

Hab. Mexico, Teapa in Tabasco (*Höge, H. H. Smith*), Yucatan (*coll. Oberthür*); British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Cahabon (*Champion*).—Venezuela, Cumana [1].

The eight examples before me from Central America only differ from La Ferté's description of this species in having the head and thorax lighter in colour—pitchy-red instead of black—and the basal one or two joints of the antennæ fusco-testaceous or testaceous; they agree perfectly with the types. Allied to *A. spinicollis*, but differing from it by the very coarse sculpture of the head and thorax and the very prominent eyes. The antennæ (the basal one or two joints excepted) are black, with the apical joints flavous; the head is very coarsely and rugosely punctured, and has a smooth longitudinal space along the middle, the basal portion being also smooth and shining; the thorax is shining, angularly dilated at the sides before the middle (and also furnished with one or two short teeth in front of this), and very coarsely punctured, the punctures confluent on the anterior portion; the elytra are rather coarsely striate-punctate to a

little beyond the middle and thence to the apex almost smooth, and have a common median fascia and sometimes the extreme base black or piceous; the legs are flavo-testaceous, the base of the tibiæ sometimes infuscate.

27. **Anthicus æquinoctialis.**

Anthicus æquinoctialis, Dej. Cat. 3rd edit. p. 238[1].
Anthicus (*Acanthinus*) *æquinoctialis*, La Ferté, Monogr. Anthic. p. 137[2].

Hab. Mexico, Jalapa (*Höge*), Atoyac in Vera Cruz (*H. H. Smith*); British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Lanquin (*Champion*); Panama, Volcan de Chiriqui (*Champion*).—Colombia[2], Cartagena[1]; Venezuela; Brazil, Bahia[2].

Central-American specimens agree well with La Ferté's types and description. In this insect the head and thorax are rugulose and opaque, and ferruginous in colour; the elytra are testaceous or reddish-testaceous, shining, rather coarsely striate-punctate to a little beyond the middle, the punctures thence to the apex abruptly becoming very much finer; the eyes are large and prominent; the thorax has a short tooth at the sides before the middle; the transverse post-basal depression of the elytra is moderately deep; the antennæ are pale ferruginous; the legs are entirely testaceous; the posterior tibiæ in both sexes are slightly curved and somewhat dilated. *A. rugosus*, La Ferté, from Brazil, is a very closely allied form.

28. **Anthicus varicornis.**

Elongate, pitchy-red, shining; the elytra testaceous or flavo-testaceous, with a common black or piceous median fascia (not reaching the lateral margin) and a brownish apical patch, these markings usually connected along the suture and showing a tendency to enclose a large ante-apical spot of the ground-colour on each elytron, the extreme base and scutellar region sometimes brownish (in one example this brown marking extends along the suture to the median fascia); the entire upper surface sparsely clothed with long, erect, bristly hairs. Head rounded at the sides and very convex behind, with only a few very widely scattered punctures at the sides and in front, the eyes not very prominent; the palpi piceous; antennæ black, the basal one or two joints testaceous, the apical one flavous; prothorax much longer than broad, transversely convex anteriorly, the sides obsoletely denticulate and somewhat angularly dilated before the middle, strongly constricted behind, and feebly dilated at the extreme base, the latter margined, the flanks with a deep excavation, the surface sparsely and rather finely punctured; elytra coarsely striate-punctate to a little beyond the middle and thence to the apex almost smooth, the transverse post-basal depression shallow but distinct; legs flavo-testaceous or testaceous, the base of the tibiæ usually black or infuscate; fifth ventral segment deeply triangularly depressed in the middle behind and the apex truncate in the male.
Length 2–2½ millim. (♂ ♀.)

Hab. Guatemala, San Juan and Senahu in Vera Paz (*Champion*); Nicaragua (*Sallé*), Chontales (*Janson*).

Seven examples. Closely allied to *A. striato-punctatus*, La Ferté, from which it may readily be distinguished by the very much smoother thorax and the much less prominent eyes; the elytra are similarly marked and similarly sculptured, and the antennæ also have the apical joint flavous. In some specimens the head and thorax are reddish-testaceous.

29. **Anthicus quadriplagiatus.** (Tab. X. fig. 19.)

Anthicus (*Ischyropalpus*) *quadriplagiatus,* La Ferté, Monogr. Anthic. p. 143 [1].

Hab. Panama, San Lorenzo in Chiriqui (*Champion*).—Colombia [1].

Three female specimens of this species were captured by myself in the "tierra caliente" of Chiriqui; they agree perfectly with the type contained in the La Ferté collection. *A. sericans* (Er.), La Ferté, from Peru and Brazil, is a closely allied form. The subgenus *Ischyropalpus* was proposed by La Ferté to include these and some other species from Tropical South America, all of comparatively large size; they have the thorax greatly rounded and dilated at the sides anteriorly, abruptly and obliquely narrowed from about the middle, slightly dilated at the base, the flanks concave, and the lateral margins rather prominent. In *A. quadriplagiatus* the entire upper surface is very densely and finely punctured and almost opaque; the head and thorax are ferruginous; the elytra reddish- or flavo-testaceous, with an ill-defined triangular scutellar patch, a common transverse fascia a little beyond the middle, and the suture narrowly, piceous or brownish. The elytra are long, parallel, and rather depressed. The form of the head is well shown by La Ferté (*op. cit.* t. 27. fig. 23). The thorax is as wide as, or even wider than, the head.

30. **Anthicus exiguus.** (Tab. X. fig. 20.)

Short, of a uniform testaceous colour, slightly shining, thickly clothed with fine, silky, appressed, yellowish pubescence. Head large and broad, somewhat angularly extended on either side behind, coarsely and closely punctured, with a smooth central line, the occiput distinctly impressed, the eyes black and moderately prominent; antennæ short, about reaching the base of the prothorax, entirely testaceous; prothorax broader than long, as wide as or wider than the head (in some examples more strongly transverse than in others), moderately convex, broadest in front and obliquely narrowing thence to the base, the surface finely and densely punctured, the base very obsoletely margined; elytra short, moderately convex, rounded at the sides, the humeri obtuse, the base slightly emarginate, the surface densely but less finely punctured than that of the prothorax; legs entirely testaceous; fifth ventral segment truncate and unimpressed in the male.

Length $1\frac{1}{2}$–$1\frac{2}{3}$ millim. (♂ ♀.)

Hab. Guatemala, Champerico (*Champion*).

Found in plenty by myself on the Pacific coast. This minute species is allied to the European *A. bimaculatus*, Illig., and to the North-American *A. maritimus*, Lec., and *A. ictericus*, La Ferté; it differs from *A. ictericus*, which it resembles in its small size, in having the head very much more coarsely and less closely punctured and also more rounded at the sides behind (the head in *A. ictericus* being broadly truncate at the base). The type of *A. ictericus* is not contained in the La Ferté collection, but Dr. Horn has kindly forwarded an example of the species for examination. This insect, as noted by Leconte (Proc. Acad. Phil. vi. p. 102), is from the Atlantic coast.

31. **Anthicus dilaticollis.**

Moderately elongate, of a uniform testaceous or fusco-testaceous colour, the suture of the elytra often infuscate for a short distance before the apex, thickly clothed with fine decumbent pubescence. Head large and broad, somewhat angularly extended on either side behind (the sides parallel immediately behind the eyes), closely and rather coarsely punctured, with a smooth central line, the occiput slightly impressed, the eyes black and moderately prominent; antennæ short, about reaching the base of the prothorax, testaceous; prothorax moderately convex, about as broad as (or rather broader than) long, as wide as the head, widest in front and obliquely narrowing thence to the base, the surface densely and finely punctured, the base obsoletely margined; elytra comparatively short, a little rounded at the sides, the humeri obtuse but moderately prominent, the base slightly emarginate, the surface densely but less finely punctured than that of the prothorax; legs entirely testaceous; fifth ventral segment truncate in the male.

Length $1\frac{7}{8}$–$2\frac{1}{8}$ millim. (♂ ♀.)

Hab. Mexico, Ventanas (*Forrer, in coll. Oberthür*), Guanajuato, Soledad (*Sallé*), Vera Cruz (*Höge*); Guatemala (*Sallé*), San Gerónimo, Dueñas (*Champion*).

Thirteen examples. Larger and more elongate than *A. exiguus*, the elytra relatively longer and less ovate; also closely allied to the N.-American *A. ictericus*, La Ferté, but differing from that species in its more coarsely punctured head. From *A. spretus*, Lec., a specimen of which from Arizona has been communicated by Dr. Horn, it may be known by the thorax being broader in front and more transverse, the head less coarsely punctured, and the elytra less elongate. *A. lugubris*, La Ferté, from California, also resembles *A. dilaticollis*, but differs from it in its black colour and smaller eyes.

32. **Anthicus basimacula.** (Tab. X. fig. 21.)

Moderately elongate, black, the shoulders of the elytra broadly testaceous, slightly shining, thickly clothed with fine, ashy, appressed pubescence. Head large and broad, somewhat angularly extended on either side behind, densely and finely punctured, with a smooth central line, the occiput distinctly impressed; the eyes moderately prominent, rather small; the palpi testaceous; antennæ short, barely reaching the base of the prothorax, entirely testaceous; prothorax moderately convex, about as broad as long, rather wider than the head, widest in front and obliquely narrowing thence to the base, the surface densely and finely punctured, the disc with an obsolete median groove behind the middle ending in a distinct impression before the base, the base feebly margined; elytra moderately long, a little rounded at the sides, subparallel in front, the humeri rounded but rather prominent, the surface very closely punctured, the punctuation coarser than that of the prothorax; legs testaceous, the femora slightly darker.

Length $2\frac{1}{2}$ millim.

Hab. Mexico, Aguas Calientes city (*Höge*).

One example only, apparently a female. In the elytral markings this insect resembles the European *A. fenestratus*, Schmidt; it is perhaps nearest allied to *A. dilaticollis*.

33. **Anthicus pauxillus.** (Tab. X. fig. 22.)

Moderately elongate; the head and prothorax varying in colour from ferruginous to piceous; the elytra testaceous, with a broad transverse median fascia (not quite reaching the suture) and an apical patch piceous or black, these markings usually connected along the lateral margin and near the suture (thus enclosing a spot of the ground-colour); the upper surface shining and finely pubescent. Head very large, strongly

transverse, broadly truncated behind, very closely and finely punctured, with a smooth central line, the occiput not impressed, the eyes large; antennæ testaceous or fusco-testaceous, slender, extending a little beyond the base of the prothorax, the penultimate joints transverse; prothorax a little narrower than the head, about as broad as long, widest in front and obliquely narrowing thence to the base, the base feebly margined, the surface very closely and finely punctured; elytra convex, comparatively short, slightly rounded at the sides, the humeri rounded, the surface densely and finely punctured, the punctuation coarser than that of the prothorax; legs testaceous or flavo-testaceous.

Length $1\frac{2}{3}$ millim. (♂ ♀.)

Hab. GUATEMALA, Zapote, Capetillo, Balheu (*Champion*).

Five examples. This insect is very like *A. minusculus*, but differs in the head being more finely punctured, the thorax broader in front and more obliquely narrowing behind, and the elytra less densely punctured. The elytra are entirely testaceous at the base, and the median fascia is usually connected near the suture and at the sides with the apical one, so as to enclose a spot of the ground-colour (the markings thus resembling those of *A. cervinus*). *A. bellulus*, Lec., apparently has the elytra more densely punctured and the thorax less dilated at the sides in front. Examples of a closely allied undescribed form from San Domingo (*Sallé*) are contained in La Ferté's collection, and there labelled *A. dominicanus*, La Ferté.

34. **Anthicus floralis.**

Anthicus floralis (Payk.), La Ferté, Monogr. Anthic. p. 150 [1]; Lec. Proc. Acad. Phil. vi. p. 98 [2].
Anthicus basillaris, Say, Journ. Acad. Phil. iii. p. 279 (1824) [3]; Complete Writings, ii. p. 165; La Ferté, Monogr. Anthic. p. 274 [4]; Quedenf. Berl. ent. Zeitschr. 1886, p. 122 [5].
Anthicus umbellatarum, Dej. Cat. 3rd edit. p. 239 [6].
Var. *Anthicus quisquilius*, Thoms. Skand. Col. vi. p. 360 [7].

Hab. NORTH AMERICA [1 2 3 4 5].—MEXICO, San Pedro in Coahuila (*Dr. Palmer*), Villa Lerdo in Durango, Aguas Calientes city, Pachuca, Cerro de Plumas, Jalapa (*Höge*), Cordova (*Sallé*).—SOUTH AMERICA, Colombia [5], Brazil, Chili [1 6]; ANTILLES, Porto Rico [5], Guadaloupe [1].—EUROPE [1 7]; SOUTH AFRICA; CHINA [5]; CEYLON [5]; EAST INDIES [5].

This cosmopolitan insect seems to be gradually becoming introduced into most parts of the world. The examples received from Cordova and Jalapa belong to the var. *quisquilius*, Thoms.; the others from elsewhere in Mexico to the typical form. The American synonymy only is quoted.

35. **Anthicus vicinus.** (Tab. X. fig. 23.)

Anthicus vicinus, La Ferté, Monogr. Anthic. p. 157 [1]; Lec. Proc. Acad. Phil. vi. p. 98 [2].
Anthicus lætus, La Ferté, loc. cit. p. 157 [3].
Anthicus fulvomicans, Quedenf. Berl. ent. Zeitschr. 1886, p. 122 [4].

Hab. NORTH AMERICA, United States [1], Middle and Southern States [2], Texas [3].—

Mexico [4], Guanajuato, Cordova (*Sallé*), Jalapa, Vera Cruz, Frontera and San Juan Bautista in Tabasco (*Höge*), Teapa (*Höge*, *H. H. Smith*); Guatemala (*Sallé*), Paso Antonio, Zapote, Dueñas, Guatemala city (*Champion*); Panama, Matachin (*coll. Oberthür*).—Colombia; Porto Rico [4].

Central-American specimens of this variable species belong to the var. *b* of La Ferté. I have examined his types of *A. vicinus* and *A. lætus*, and fail to find any difference of importance between them; the latter chiefly differing from the light-coloured form of *A. vicinus* in having the elytra black at the base. Texan examples of the typical form and of the var. *b* of *A. vicinus* have been communicated by M. Sallé and Dr. Horn for comparison. The species is common in Mexico and Guatemala. *A. vicinus* is allied to *A. floralis*, but is very much narrower and smaller than that insect, and the head is without occipital impression. Central-American specimens are of a bright reddish-testaceous colour, the elytra each with a large spot on the disc about the middle (sometimes in the form of a broad transverse fascia almost united to the opposite one at the suture) and the apex black; sometimes the elytra have a triangular scutellar patch, or the base narrowly, infuscate. In the United States entirely dark forms occur. The upper surface is very shining and almost glabrous; the head and thorax bear fine widely scattered punctures; the elytra are long, rather depressed, coarsely and somewhat thickly punctured; the legs and antennæ are testaceous.

36. **Anthicus infernus.**

Anthicus infernus, La Ferté, Monogr. Anthic. p. 159 [1].

Hab. Mexico [1] (*coll. Oberthür*), Mexico city (*Höge*), Guanajuato (*Sallé*, *ex Dugès*).

Our specimens from Guanajuato and Mexico city agree perfectly with La Ferté's type. They are black and very shining; the head is comparatively long, and subangularly dilated at the sides behind; the eyes are very small; the thorax is obliquely narrowed from a little before the middle, margined at the base; the elytra are long, parallel, and depressed, coarsely punctured, with prominent humeri and the suture a little raised; the upper surface is almost bare.

37. **Anthicus confinis.**

Anthicus confinis, Lec. Proc. Acad. Phil. vi. p. 98 [1].

Hab. North America, San Diego in California [1], Arizona.—Mexico, Northern Sonora (*Morrison*), San Pedro in Coahuila (*Dr. Palmer*), Villa Lerdo in Durango (*Höge*).

We have received numerous examples of this species from the late Mr. Morrison under the name of *A. nigritulus*, Lec.; they agree, however, much better with the description of *A. confinis*, a specimen of which, from Arizona, has been communicated by Dr. Horn. Less parallel than *A. infernus*; the eyes larger, the elytral punctuation

finer. The upper surface is entirely black, very shining, and with very fine, short, scattered pubescence, which is easily abraded, so that the insect appears to be almost glabrous.

38. **Anthicus horridus.**

Anthicus horridus, Lec. Ann. Lyc. N. York, v. p. 154[1]; Proc. Acad. Phil. vi. p. 98[2].

Hab. North America, Gila river[1 2].—Mexico, Nuevo Laredo in Tamaulipas (*Höge*).

A single example captured on our northern boundary by Herr Höge during his second expedition agrees very well with Leconte's diagnosis[2]:—"Elongatus, testaceus, pilis longis erectis hispidus, capite postice rotundato thoraceque grosse punctatis, hoc longiusculo subcampanulato, elytris grosse punctatis, fascia obscura pone medium ornatis. Long. ·11."

39. **Anthicus macrocephalus.** (Tab. X. fig. 24.)

Elongate, of a uniform fusco-testaceous colour, shining, thickly clothed with long, rather coarse, decumbent whitish pubescence. Head convex, comparatively elongate, narrow, rounded at the sides behind, thickly and finely punctured, a longitudinal space down the middle smooth, the occiput unimpressed, the eyes black, large, and somewhat prominent; antennæ moderately long, rather slender, entirely testaceous; prothorax convex, rather longer than broad, very little narrower than the head, the sides gradually and obliquely converging from the middle and slightly dilated at the extreme base, the base shallowly grooved within, the surface densely and finely punctured; elytra elongate-oval, about twice the width of the prothorax, feebly depressed on either side of the suture towards the apex, without post-basal depression, the humeri rounded but rather prominent, the surface densely and somewhat coarsely punctured, the punctuation becoming very much finer beyond the middle; legs entirely testaceous; fifth ventral segment simply truncate in the male.

Length 2½ millim. (♂.)

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*), Yucatan (*coll. Oberthür*).

Two examples. Amongst the species described by La Ferté, *A. macrocephalus* is nearest allied to *A. pusillus*, from which it differs by the much narrower and longer head, the much longer and entirely testaceous antennæ, and the longer thorax. The comparatively narrow elongate head distinguishes the species from all the other Central-American representatives of this section of the genus.

40. **Anthicus lutescens.**

Moderately elongate, of a uniform testaceous or fusco-testaceous colour, rather shining, somewhat thickly clothed with fine, decumbent, yellowish pubescence. Head transverse, convex, rounded at the sides behind, subtruncate at the base, closely and finely punctured, and with a smooth central line, the occiput not or very faintly impressed; the eyes black, moderately large, not very prominent; antennæ testaceous, extending a little beyond the base of the prothorax, slender, thickening outwardly; prothorax convex, as long as broad, a little narrower than the head, broadest in front, the sides gradually and obliquely converging posteriorly and a little dilated at the extreme base, the base finely margined towards the sides, the surface densely and finely punctured; elytra moderately long, a little rounded at the sides, the humeri rounded, the base feebly emarginate and slightly swollen on either side of the scutellum, the surface very

closely punctured, the punctuation coarser than that of the prothorax; legs flavo-testaceous; fifth ventral segment truncate and unimpressed in the male.

Length $2\frac{1}{4}$–$2\frac{1}{3}$ millim. (♂ ♀.)

Hab. Mexico, Teapa (*H. H. Smith, Höge*); Guatemala, Paso Antonio (*Champion*).

Four examples, two from the Atlantic and two from the Pacific slope. Less elongate than *A. macrocephalus*; the head very much shorter; the elytra broader, more rounded at the sides, and more finely punctured; the pubescence shorter and much finer. Very near *A. pusillus*, La Ferté, from New Orleans (the type of which I have examined), but differing from it in having the head narrower, the antennæ longer, and the elytra not so coarsely punctured, the punctuation of the head also coarser and less close; also closely allied to a Texan insect communicated by M. Sallé (under the name *A. pusillus*, but not agreeing with La Ferté's type), but with less truncate head and shorter and finer pubescence. *A. spretus*, Lec. (=*A. facilis*, Casey), much resembles *A. lutescens*, but has a flatter, more truncate, and much more coarsely punctured head, and the sides of the thorax not dilated at the base.

41. **Anthicus cervinus.**

Anthicus bifasciatus, Say, Journ. Acad. Phil. v. p. 245[1]; Complete Writings, ii. p. 309; Haldem. Proc. Acad. Phil. i. p. 304 (nec Rossi)[2].

Anthicus cervinus, La Ferté, Monogr. Anthic. p. 181[3]; Lec. Proc. Acad. Phil. vi. p. 100[4].

Anthicus terminalis, Lec. in Agass. Lake Superior, p. 230[5].

Anthicus bizonatus, La Ferté, Monogr. Anthic. p. 274[6].

Hab. North America, United States[2 3 4], Lake Superior[5], E. Florida[1 6].—Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

A female example of an *Anthicus* received from Western Mexico merely differs from La Ferté's type of *A. cervinus* and from others of the same species from the United States communicated by M. Sallé and Dr. Horn in having the elytra a little broader and less parallel: in the absence of further material it is not advisable to separate it from that insect. *A. cervinus* is stated by Leconte[4] to be a very variable species; it has the upper surface densely and somewhat coarsely punctured and rather thickly pubescent; the head with a smooth central line and without occipital groove. The specimens before us are ferruginous or reddish-testaceous in colour; the elytra with a broad transverse fascia beyond the middle (not reaching the suture and widening outwardly), and the apex piceous or black, these markings connected near the suture and enclosing a spot of the ground-colour on each elytron.

A second example, from Villa Lerdo in Durango (*Höge*), is perhaps an extreme form of the same species.

42. **Anthicus quadrilunatus.** (Tab. X. fig. 25.)

Anthicus quadrilunatus, La Ferté, Monogr. Anthic. p. 201, t. 29. figg. 1 *a*–1 *d* (nec. Lec.)[1].

Hab. North America, ? California[1].—Mexico (*coll. Oberthür*), Mexico city (*Höge*, *H. H. Smith*).

We have received seven examples of this variable species from the neighbourhood of the city of Mexico, and there are three others from Mexico in the collection of M. Réné Oberthür: those in which the elytral spots are well defined agree precisely with La Ferté's type. The insect varies according to the predominance of the ferruginous or of the pitchy-black colour; in one specimen the anterior spots of the elytra are entirely obsolete and the posterior ones much reduced in size, in others the spots are greatly extended and more or less confluent; in some examples the spots are of a bright red colour.

A. quadrilunatus is an elongate rather convex species allied to the European *A. antherinus*, Linn.; the entire upper surface is coarsely and closely punctured, and clothed with rather long, coarse pubescence; the punctuation of the elytra is much coarser than that of the head and thorax; the legs vary in colour, but the femora are always darker towards the apex. It is more convex than the North-American *A. haldemani*, Lec. (a specimen of which I have before me), and also differs in the head being unimpressed behind, &c.

43. **Anthicus lecontei.** (Tab. X. fig. 26.)

Anthicus quadrilunatus, Lec. Proc. Acad. Phil. vi. p. 100 (nec La Ferté)[1].

Hab. North America, New Mexico[1], Texas (*coll. Sallé*), Arizona (*Horn*).—Guatemala, Rio Naranjo (*Champion*).

A single example, captured by myself in the Pacific coast-region of Guatemala, is referable to this species; it agrees well with a specimen from Texas, communicated by M. Sallé, and with one from Arizona forwarded to us by Dr. Horn under the name of *A. quadrilunatus*. Smaller and less convex than *A. quadrilunatus*, La Ferté; the head with a very distinct occipital impression and a smooth central line; the pubescence of the upper surface shorter and finer and the punctuation not nearly so coarse; the legs and antennæ testaceous; the elytra much flatter on the disc.

Leconte's doubts as to his correct identification of *A. quadrilunatus*, La Ferté, prove to be well grounded, the New-Mexican specimen described by him under that name[1] belonging to a very different species.

44. **Anthicus currax.**

Elongate, moderately shining; the head and prothorax testaceous or flavo-testaceous; the elytra piceous, each with two large flavous spots, one below the base and another near the apex (the anterior one transverse and extending to the lateral margin and sometimes to the suture); the upper surface finely and somewhat thickly pubescent. Head moderately large, strongly transverse, feebly convex, subangularly dilated at

the sides behind, broadly truncate at the base, and with a distinct occipital impression, very sparsely and finely punctured, a longitudinal space down the middle smooth, the eyes large; antennæ entirely testaceous; prothorax about as long as broad, moderately convex, a little narrower than the head, the sides obliquely converging from before the middle and parallel at the extreme base, the base very shallowly grooved on either side within, the disc distinctly canaliculate, the surface very finely and densely punctured; elytra long and subparallel, flattened on the disc, with an exceedingly shallow broad post-basal depression (occupied by the anterior flavous spot), the humeri rounded, the surface closely and finely punctured (the punctures coarser than those on the prothorax); legs slender, pale testaceous; the fifth ventral segment simply truncate in the male.

Length $3\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico (*coll. Oberthür*), Soledad (*Sallé*).

Four examples. This species is allied to *A. tetrops*, but it has the head and thorax more convex, narrower, shining, and flavo-testaceous in colour; the head is much smaller; the elytral spots are larger, the anterior one extending to the lateral margin. More elongate than *A. lecontei*, the upper surface much more finely punctured. The only known locality for *A. currax* is Soledad, on the Atlantic slope.

45. **Anthicus tetrops.** (Tab. X. fig. 27.)

Elongate, depressed; the head and prothorax ferruginous or flavo-ferruginous, opaque; the elytra piceous, each with a rather large transverse or slightly oblique testaceous spot on the disc before the middle and a smaller one on the disc towards the apex, slightly shining; the upper surface somewhat thickly clothed with fine, silky, appressed pubescence and with a few widely scattered short erect hairs. Head very large and broad, strongly transverse, dilated at the sides behind, broadly truncate at the base, and with a very distinct occipital impression, somewhat flattened in front, sparsely and very finely (but quite distinctly) punctured, a longitudinal space down the middle smooth, the eyes black, large, and rather prominent; antennæ rather slender, joints 7–10 subtriangular, testaceous, the outer joints slightly infuscate; prothorax about as broad as long, a little narrower than the head, slightly flattened on the disc, the sides obliquely converging from before the middle and a little dilated at the extreme base, the base shallowly grooved on either side within, the disc obsoletely canaliculate, the surface very finely and densely punctured; elytra long and subparallel, slightly narrowed anteriorly, a little flattened on the disc, the humeri rounded, the surface closely and finely punctured (the punctures coarser than those on the head and prothorax), without post-basal depression; legs slender, testaceous; the fifth ventral segment simply truncate at the apex in the male.

Length $2\frac{3}{4}$–$3\frac{1}{4}$ millim. (♂ ♀.)

Hab. Guatemala, Champerico (*Champion*).

Ten examples, found on the Pacific coast at Champerico. Allied to *A. lecontei*, but with the head and thorax ferruginous, much less convex, more finely punctured, and opaque, the head more strongly transverse, the elytra more finely punctured, &c. The elytral spots vary a little in size, but they do not reach the suture. The head is subtriangular and comparatively very large.

46. **Anthicus minusculus.**

Moderately elongate; the head varying in colour from flavo-testaceous to piceous, the prothorax from testaceous to piceous with the disc obscurely ferruginous; the elytra testaceous or ferruginous, with the base (in one specimen indistinctly), a very broad transverse median fascia (not reaching the suture), and the apex black (these markings connected along the lateral margin in one specimen); the upper surface

shining, finely pubescent. Head moderately large, truncate behind, closely and somewhat coarsely punctured, with a smooth central line, the occiput not or very feebly impressed, the eyes large; antennæ testaceous or fusco-testaceous, short, about reaching the base of the prothorax, slender, the penultimate joints transverse; prothorax convex, about as long as broad, narrower than the head, narrowing behind, the base obsoletely margined, the surface densely and finely punctured; elytra convex, comparatively short, feebly rounded at the sides, the humeri rounded, the surface densely and finely punctured, the punctuation a little coarser than that of the prothorax; legs testaceous or fusco-testaceous.

Length 1 millim. (♂ ♀.)

Hab. Guatemala, Panajachel, San Gerónimo (*Champion*).

Three examples. This species is closely allied to the N.-American *A. nanus* and *A. bellulus*, Lec. Compared with an example of the former, from Arizona, communicated by Dr. Horn, *A. minusculus* is smaller, more convex, and a little less elongate; the head is smaller and not so broad, and the elytra are black at the base and apex. *A. bellulus*, from San Diego, California, appears to have a more densely and more finely punctured head and a finer frontal line. All four species are of very small size.

47. **Anthicus squamosus.**

Anthicus squamosus, La Ferté, Monogr. Anthic. p. 216 [1].

Hab. North America, ? California (*Piccolimini*) [1].—Mexico (*coll. Oberthür*), Ciudad in Durango (*Höge*), Guanajuato (*Sallé*, *Dugès*).

This very distinct *Anthicus* has been captured in some numbers by M. E. Dugès at Guanajuato. Our examples agree precisely with La Ferté's type. The locality "California" is probably erroneous. The insect was unknown to Leconte. An elongate, parallel, rather convex species, brownish-black in colour, and subopaque; the entire upper surface very densely and finely (the elytra a little more coarsely) punctured, and thickly clothed with extremely short, appressed, scale-like, greyish pubescence; the antennæ and legs fusco-ferruginous or ferruginous. *A. squamosus* has much the facies of a *Monotoma*.

48. **Anthicus fulvipes.**

Anthicus fulvipes, La Ferté, Monogr. Anthic. p. 177 [1]; Lec. Proc. Acad. Phil. vi. p. 102 [2].

Hab. North America, United States [1], Louisiana [2], Florida.—Mexico, Cordova (*Sallé*), Atoyac in Vera Cruz, Teapa (*H. H. Smith*), San Juan Bautista in Tabasco (*Höge*); Guatemala, Paso Antonio (*Champion*): Panama, Volcan de Chiriqui (*Champion*).

Our numerous Central-American specimens of this species are smaller and less elongate than the La Ferté types or than any I have seen from the United States; but in a long series of examples there is considerable variation in size. The elytra are also not quite so coarsely punctured. Mexican and Guatemalan examples are smaller and shorter than the others; Chiriqui specimens are more like those from Florida &c. The

species of this section have a peculiar facies, owing to the short head and thorax and elongate comparatively broad elytra. The head is sparsely and minutely punctured and has a smooth central line; the occiput is not impressed. The antennæ are short, very slender at the base, and thickened outwardly, the penultimate joints as broad as long; the basal joints are testaceous, the apical joints infuscate. The thorax is scarcely so long as broad, very densely and minutely punctured, distinctly margined at the base. The elytra are rather convex, closely and coarsely punctured, the punctuation becoming very much finer towards the apex. The fifth ventral segment is truncate and unimpressed in the male. Examples occur of a light reddish-brown colour.

49. **Anthicus teapensis.** (Tab. X. fig. 28.)

Moderately elongate, pitchy- or brownish-black, the prothorax sometimes ferruginous at the base and apex, the head and prothorax dull, the elytra moderately shining, the upper surface thickly clothed with fine decumbent pubescence. Head strongly transverse, truncate behind, densely and minutely punctured and with a fine smooth central line, the occiput distinctly impressed, the eyes very large and moderately prominent; antennæ very short, about reaching the base of the prothorax, the penultimate joints transverse, testaceous, the three or four apical joints infuscate; prothorax not quite so long as broad, much narrower than the head, moderately convex, narrowed at the sides behind and dilated at the base, the base very distinctly margined, the surface densely and minutely punctured; elytra rather convex, twice as wide as the prothorax, moderately elongate, subparallel in the male, a little more ovate in the female, truncate at the base, the humeri rounded, the base a little swollen on either side of the scutellum, the surface closely and coarsely punctured, the punctuation becoming very much finer beyond the middle; legs entirely testaceous; fifth ventral segment deeply foveate in the middle and truncate at the apex in the male.

Length $2\frac{1}{4}$–$2\frac{1}{3}$ millim. (♂ ♀.)

Hab. Mexico, Frontera and San Juan Bautista in Tabasco (*Höge*), Teapa in Tabasco (*Höge*, *H. H. Smith*).

This insect is not uncommon in the Mexican State of Tabasco, whence we have received numerous examples. *A. teapensis* is closely allied to *A. fulvipes*, La Ferté (an insect also occurring in Tabasco), but differs from that species in the head being densely and more minutely punctured, the occiput distinctly impressed, and the antennæ shorter, the latter having the penultimate joints transverse; the fifth ventral segment is also deeply foveate in the male. In *A. fulvipes* the head is much smoother than the thorax; in *A. teapensis* the head and thorax are almost equally densely punctured.

50. **Anthicus fœderatus.**

Moderately elongate, the head and prothorax ferruginous, piceous-brown, or piceous, the elytra piceous-brown, with the suture very narrowly darker; the head and elytra moderately shining, the prothorax dull; the upper surface clothed with rather long, fine, decumbent pubescence. Head transverse, convex, truncate behind, sparsely and minutely punctured, with a fine smooth central line, the occiput unimpressed, the eyes very large; antennæ extending beyond the base of the prothorax, moderately slender at the base, thickening outwardly, the penultimate joints subtriangular, testaceous, the outer four or five joints usually infuscate; prothorax as long as broad, narrower than the head, moderately convex, narrowed at the sides behind and slightly dilated at the base, the base distinctly margined, the surface very densely and minutely punctured; elytra rather convex, twice as wide as the prothorax, moderately elongate, subparallel towards the base, the humeri rounded, the base a little swollen on either side of the suture and truncate, the

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surface closely and coarsely punctured, the punctuation becoming very much finer beyond the middle; legs entirely testaceous; fifth ventral segment shallowly transversely depressed in the middle and truncate at the apex in the male.

Length $2\frac{1}{4}$–$2\frac{1}{3}$ millim. (♂ ♀.)

Hab. GUATEMALA, Yzabal (*Sallé*), Rio Naranjo (*Champion*).

Eleven examples, ten from the Pacific and one from the Atlantic slope. Extremely close to *A. fulvipes*, La Ferté, and only separable by the longer and stouter antennæ and by the male having the fifth ventral segment transversely concave in the middle. It also approaches *A. lutescens*, but differs from that species in having the thorax more densely and more minutely punctured (and consequently more opaque), the elytra more truncate at the base and more uniformly punctured (the punctuation much coarser on the basal half), and the pubescence longer and coarser.

Fam. MORDELLIDÆ.

Group ANASPIDES.

The three known North-American genera are all represented within our region, and a new genus is required for some of the Central-American forms. The group is not nearly so numerous in species as the Mordellides in the warmer regions of the earth, and seventeen only are here recorded from Central America; of these ten belong to *Pentaria*, one to *Diclidia*, one to *Anaspis*, and five to a new genus.

All the Central-American members of the group were obtained at a considerable elevation above the sea.

DICLIDIA.

Diclidia, Leconte, Proc. Acad. Phil. xiv. p. 43 (1862); J. B. Smith, Trans. Am. Ent. Soc. x. p. 75.

The single species from Guatemala referred to this genus agrees accurately with Leconte's definition. The compressed and much elevated mesosternum (this being very sharply carinate between the middle coxæ in front) and the bilobed penultimate joint of the anterior and middle tarsi are its chief characters. The male of the Guatemalan insect, like that of the North-American one, possesses very peculiar appendages to the abdomen. The sixth ventral segment is well exposed in the male, but it is covered by the fifth and not visible in the female.

1. **Diclidia undata.** (Tab. XI. figg. 1, ♀; 1 *a*, terminal ventral segments of the abdomen, ♂.)

Moderately elongate, densely and very finely pubescent, finely transversely strigose above; testaceous or flavo-testaceous; the prothorax irregularly mottled with piceous (between which ill-defined spots of the ground-colour are visible); the elytra with an irregular oblong patch on the middle of the disc at the base, a common strongly angulated rather broad median fascia, from which a branch extends upwards on either side of the suture, a broad anteapical fascia (extending forwards at the suture and sometimes on the

middle of the disc also, and usually with an oblique branch extending downwards), and the suture at the base narrowly, piceous. Eyes coarsely granulated, black; antennæ testaceous, the intermediate joints a little darker in one example, very long and slender, thickening a little outwardly, distinctly shorter in the female than in the male, joints 3 and 4 equal in length, each about as long as 1 and 2 together, 5 much shorter than 4, 5–7 decreasing in length, 8–10 wider than 7, subtriangular, equal, 11 ovate, much longer than 10; prothorax about one half broader than long, the sides rounded and rapidly converging from a little before the base, the hind angles subrectangular; beneath in great part infuscate; legs testaceous or fusco-testaceous, very long and slender, the penultimate joint of the front and middle tarsi as long as the preceding joint, and strongly bilobed.

♂. Abdomen with two long flattened appendages proceeding from the tip (between which the central sheath of the œdeagus is extruded), the appendages concave and clothed with long fine hairs within, widened outwardly, and very obliquely truncate at the apex; the sixth ventral segment exposed, fully half the length of the fifth, and finely carinate down the middle behind; the fifth ventral segment unemarginate.

Length $3\frac{1}{3}$–4 millim. (♂ ♀.)

Hab. GUATEMALA, Cerro Zunil 4000 feet, Panajachel 5000 feet (*Champion*).

One male and four female examples. This insect has much the facies of an *Hallomenus*. It differs from the Texan *D. lætula*, Lec., a specimen of which has been kindly communicated by Dr. Horn, in the strongly angulated and more numerous dark markings of the elytra (these being equally variable in extent) and in the infuscate thorax; and also in the unemarginate fifth ventral segment in the male. The abdominal appendages of the male are only visible when the genital organs are extruded.

PENTARIA.

Pentaria, Mulsant, Ann. Soc. Linn. de Lyon, 1856, p. 439 (Longipèdes, p. 135); Lacordaire, Gen. Col. v. p. 614; Leconte, Proc. Acad. Phil. xiv. p. 44; Emery, Monogr. Mord. in L'Abeille, xiv. p. 9; J. B. Smith, Trans. Am. Ent. Soc. x. p. 75.

Anthobates, Leconte, in Agass. Lake Superior, p. 231.

Of the six described species of *Pentaria* four are from the United States. The genus proves to be well represented in Central America, whence ten species are now recorded; it evidently replaces *Anaspis* in the warmer regions of the New World. The species here referred to it agree in having the fourth joint of the four anterior tarsi bilobed and nearly equal to the third in length and breadth, the posterior tibiæ long and slender, and the prothorax and elytra transversely strigose. Most authors state that the sixth ventral segment is visible in this genus: in some of our species it is just visible beyond the fifth, in others (in the males especially) it is well exposed, but in several cases (in both sexes) it is completely covered by the fifth. The ventral segments are apparently similar in form in the two sexes of *Pentaria*, except in *P. trisignata*, in which the fifth is triangularly emarginate and does not cover the sixth. In *P. canescens* the tibiæ show distinct traces of oblique grooves on their outer face. The apical joint of the labial palpi appears to be more slender in this genus than in *Anaspis*, and less abruptly truncate at the apex.

The following table will assist in the identification of the Central-American species:—

Colour black, or black with the elytra paler.
Sides of the thorax moderately rounded.
Upper surface opaque.
Legs infuscate . . . . . *canescens.*
Legs testaceous . . . . . *flavipes.*
Upper surface more shining; elytra lighter in colour than the thorax; tibiæ entirely testaceous . . . . . *brunneipennis.*
Sides of the thorax more obliquely converging; elytra not lighter in colour than the thorax; legs infuscate . . . . . *brevicornis.*
Colour more or less testaceous; the elytra bi- or trifasciate.
Thorax entirely testaceous.
Elytra with the median and apical fasciæ alone distinct . . . . . *bicincta.*
Elytra with well-marked median and apical fasciæ and a transverse basal patch; form less elongate . . . . . *trisignata.*
Thorax testaceous at the base and apex, with a piceous band across the middle; elytra with three dark fasciæ, the fasciæ separated by large testaceous spots, two on each elytron . . . . . *quadriguttata.*
Colour testaceous; the elytra with a median fascia only, which is interrupted at the suture . . . . . *unifasciata.*
Colour testaceous.
Size moderate; body rather broad; thorax moderately rounded at the sides . . . . . *decolor.*
Size very small; body narrow; thorax narrowing almost from the base . *angustata.*

1. Pentaria canescens.

Moderately elongate, black, the labrum only a little lighter in colour; the upper surface opaque, thickly clothed with fine sericeous ashy pubescence, the prothorax and elytra densely transversely strigose. Head moderately large; antennæ rather short, thickening outwardly, joints 9 and 10 transverse, black, the three or four basal joints testaceous or flavo-testaceous; palpi testaceous or fusco-testaceous, the apical joint infuscate or piceous; prothorax about one half broader than long, feebly bisinuate at the base, moderately rounded at the sides, the hind angles rectangular; beneath black, densely clothed with ashy pubescence, very closely and minutely punctured, the punctures on the metasternum more or less confluent and tending to form transverse strigæ; legs piceous with the extreme base of the tibiæ testaceous, sometimes a little lighter; all the tibiæ with traces of oblique grooves on their outer face; first joint of each of the tarsi about as long as the following two joints united; fifth ventral segment similar in both sexes; anterior tarsi moderately dilated in the male.

Length $2\frac{1}{3}$–3 millim. (♂ ♀.)

Hab. Mexico, Xucumanatlan, Amula, and Omilteme, all in Guerrero (*H. H. Smith*), Mexico city (*Flohr*).

One male and three female examples. The former has been quite recently sent me by Mr. Flohr, who states that the insect was beaten from the branches of an oak. The species is not closely allied to any of the North-American *Pentariæ*. In fresh examples the pubescence is almost white in certain lights. The sixth ventral segment is not visible in the male.

2. Pentaria flavipes.

Moderately elongate, pitchy-black, the elytra usually fuscous or brownish from a little below the base to the apex, the labrum and mouth-parts testaceous or fusco-testaceous; the upper surface opaque, finely pubescent, the prothorax and elytra very densely transversely strigose. Head comparatively broad; antennæ short (not nearly reaching the base of the prothorax when the head is extended), thickening outwardly, joints 8–10 strongly transverse, 1–6 testaceous, 7–11 piceous or black; palpi testaceous, the apical joint sometimes darker at the tip; prothorax about one half broader than long, very feebly bisinuate at the base, rounded at the sides, the hind angles subrectangular; beneath piceous; legs slender, testaceous, the anterior tarsi very feebly dilated in the male; fifth ventral segment similar in both sexes.

Length $2\frac{1}{3}$–$2\frac{2}{3}$ millim. (♂ ♀.)

Hab. Mexico, Guanajuato (*Sallé*).

Six examples. Smaller and a little less elongate than *P. canescens*; the antennæ shorter and with the basal six joints testaceous; the elytra not so black; the legs more slender and entirely testaceous. The male apparently has the head broader than in the female, and the anterior tarsi feebly dilated (less so than in *P. canescens*). *P. fuscula*, Lec., from Texas and New Mexico, seems to be an allied species.

3. Pentaria brunneipennis.

Moderately elongate, rather narrow; the head and prothorax piceous; the elytra reddish-testaceous to about one-third from the base, thence to the apex brown, the apical third a little paler in colour, the suture very narrowly infuscate; the upper surface slightly shining, finely pubescent, the prothorax and elytra exceedingly finely transversely strigose. Head small; antennæ rather short (not quite reaching the base of the prothorax when the head is extended), thickening outwardly, joints 9 and 10 transverse, 1–6 flavo-testaceous, 7–11 piceous; palpi flavo-testaceous; prothorax about one-third broader than long, bisinuate at the base, moderately rounded at the sides, the hind angles rectangular; beneath piceous; legs rather stout, testaceous, all the femora piceous, but paler towards the apex, the tarsi slightly infuscate; the hind tibiæ about as long as the three basal joints of the posterior tarsi united, with traces of oblique grooves on their outer face.

Length $2\frac{1}{3}$ millim. (♀.)

Hab. Mexico, Chilpancingo (*H. H. Smith*).

One female example. Smaller, narrower, and more shining than *P. canescens*; the thorax relatively longer; the elytra brown, this colour becoming more dilute and redder in tint towards the base; the transverse strigation of the upper surface less dense.

4. Pentaria brevicornis.

Moderately elongate, rather narrow, black, the mouth-parts testaceous; the upper surface dull, finely pubescent, the prothorax and elytra very finely transversely strigose. Head small; antennæ very short (reaching very little beyond the middle of the prothorax when the head is extended), thickening outwardly, joints 8–10 transverse, 1–5 testaceous, 6–11 piceous; palpi testaceous; prothorax about one third broader than long, the sides somewhat obliquely converging anteriorly and very little rounded, the hind angles rectangular, the base a little produced in the middle behind; beneath piceous; legs slender, piceo-testaceous or infuscate, the tibiæ a little lighter.

Length $2\frac{1}{3}$–$2\frac{1}{2}$ millim.

Hab. Guatemala, Capetillo, Calderas (*Champion*).

Three examples, apparently including both sexes. Smaller, narrower, and more

slender than *P. canescens*, the antennæ much shorter and more clavate, the head smaller and narrower. The darker legs, smaller head, less transverse thorax (the sides of which are less rounded, and the base is more produced in the middle behind), and shorter antennæ distinguish it from *P. flavipes*. The base of the thorax is somewhat strongly bisinuate, and the tarsi are slender. This species also would appear to be allied to *P. fuscula*, Lec., the description of which (copied by Smith) is insufficient for identification *.

5. **Pentaria bicincta.**

Very elongate, testaceous; the elytra with a brownish or piceous fascia just beyond the middle, and another a little before the apex (the former extending upwards at the suture and at the sides, the latter not reaching the lateral margins, and in one example not reaching the suture), and the base on either side of the suture slightly infuscate; the upper surface opaque, finely pubescent, the prothorax and elytra finely transversely strigose. Head moderately large, the eyes black; antennæ testaceous, rather slender, elongate (extending beyond the base of the prothorax when the head is extended), thickening outwardly, joints 3 and 4 comparatively long, subequal, 9 and 10 about as broad as long; palpi pale testaceous; prothorax about one third broader than long, bisinuate at the base, feebly rounded at the sides, the hind angles sharply rectangular; beneath fusco-ferruginous; legs entirely testaceous.

Length 3–4 millim. (♂ ♀.)

Hab. Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

Two examples. The largest of the Central-American species of the genus. It differs from the following, *P. trisignata*, in its more elongate shape (the elytra being relatively much longer) and less distinct markings, those at the base of the elytra being scarcely visible, and the others much less extended (in one example the median fascia is almost obliterated); the legs and antennæ are paler; and the fifth ventral segment in the male is unemarginate. The longer and more slender antennæ and the different pattern of the elytra distinguish it from *P. trifasciata*. The sixth ventral segment is not visible.

6. **Pentaria trisignata.** (Tab. XI. fig. 2.)

Moderately elongate, rather broad; the head and prothorax ferruginous; the elytra testaceous, with a broad median fascia, which extends forwards along the suture and also at the sides, and is connected at the suture with a broad basal patch, and an anteapical fascia (in some examples not reaching the lateral margins, in others extending to the apex), black; the upper surface opaque, very densely and finely pubescent, the prothorax and elytra finely transversely strigose. Head moderately large, the eyes black; antennæ testaceous or fusco-testaceous, comparatively long (reaching beyond the base of the prothorax when the head is extended), rather slender, thickening outwardly, joints 3 and 4 elongate, subeqnal, 5–10 increasing in width but decreasing in length, 9 and 10 about as broad as long; palpi testaceous; prothorax about one third broader than long, feebly bisinuate at the base, a little rounded at the sides, the hind angles rectangular; beneath ferruginous or flavo-ferruginous, the venter, and sometimes the metasternum also, infuscate or piceous; legs testaceous or fusco-testaceous, moderately slender; fifth ventral segment triangularly emarginate at the apex and the sixth well exposed in the male, the anterior tarsi slender in this sex.

Length $2\frac{2}{3}$–$3\frac{1}{3}$ millim. (♂ ♀.)

Hab. Mexico, Guanajuato (*Sallé*).

* "Body entirely fuscous or piceous, legs and base of antennæ paler."

Six examples. Duller and more densely pubescent than the North-American *P. trifasciata*, Melsh. (a specimen of which has been communicated by Dr. Horn), the antennæ longer, the black markings of the elytra more extended—the median fascia broadly connected along the suture with the basal one, but the latter does not (as in *P. trifasciata*) reach the humeri. If black is taken as the ground-colour, the elytra may be described as having an oblique stripe extending from the shoulders downwards (curving upwards near the suture in some specimens), a narrow fascia beyond the middle, and sometimes the extreme apex, brownish-yellow.

7. **Pentaria quadriguttata.** (Tab. XI. figg. 3; 4, var.)

Moderately elongate; the head testaceous or reddish-testaceous; the prothorax in great part piceous, the base and apex of the same colour as the head (the light colour often forming a large spot on either side of the middle at the base); the elytra piceous or fuscous, each with a broad flavo-testaceous fascia before and another beyond the middle (the former sometimes connected with the opposite one at the suture, and extending along the side to the base, the latter not reaching the suture), the suture a little lighter in colour; the upper surface subopaque, finely pubescent, the prothorax and elytra finely transversely strigose. Head moderately large, the eyes black; antennæ short (scarcely reaching the base of the prothorax when the head is extended), thickening outwardly, joints 9 and 10 subtransverse, 1–4 testaceous, 5–11 piceous or brown; palpi testaceous; prothorax about one third broader than long feebly bisinuate at the base, slightly rounded at the sides, the hind angles rectangular; beneath piceo-testaceous, the metasternum and venter darker; legs testaceous, moderately slender; sixth ventral segment visible.

Length $2\frac{1}{3}$–$3\frac{1}{4}$ millim. (♂ ♀.)

Hab. Guatemala, Capetillo, Guatemala city, San Gerónimo (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

Var. The piceous colour on the prothorax reduced to a well-defined transverse median band; the testaceous elytral fasciæ much larger and longer, but not reaching the suture, the dark basal mark in the form of a large triangular scutellar patch, this being lighter in colour than the median and apical bands. (♀.)

Hab. Mexico, Cuernavaca (*H. H. Smith*).

Eight examples of the typical form and one of the variety. The much shorter antennæ, more shining surface, partly infuscate thorax, different elytral markings, &c., distinguish this species at a glance from *P. trisignata* and *P. trifasciata*. The insect varies in the amount of the dark and light colour, but two very distinct transverse or oblong spots are always visible on each elytron, and the thorax is more or less infuscate across the middle; the pubescence partakes of the colour of the surface from which it arises. *P. quadriguttata* has much the facies of a banded *Abdera*.

8. **Pentaria unifasciata.** (Tab. XI. fig. 5.)

Comparatively short; testaceous, the elytra each with a rather broad black transverse median band which does not reach either the suture or the lateral margin; the upper surface slightly shining, finely pubescent, the prothorax and elytra very finely transversely strigose. Head moderately large, the eyes black; antennæ testaceous, slightly darker towards the apex, short (not nearly reaching the base of the prothorax when the head is extended), thickening outwardly, joints 9 and 10 transverse; prothorax about one half broader

than long, feebly bisinuate at the base, a little rounded at the sides, the hind angles rectangular; beneath in great part piceous; legs slender, entirely testaceous.
Length $2\frac{1}{3}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

One example. Less elongate than *P. quadriguttata*, the antennæ a little shorter, the thorax and elytra testaceous, the latter with a median black fascia divided at the suture. The elytra are, relatively, a good deal shorter than in the above-mentioned species. *P. nubila*, Lec., from California, is evidently an ally of *P. unifasciata*; but, according to J. B. Smith's figure (Trans. Am. Ent. Soc. x. t. 1. fig. 11), it is a more elongate insect, and has the elytral fascia uninterrupted at the suture.

9. **Pentaria decolor.**

Moderately elongate; testaceous, the elytra sometimes slightly infuscate along the middle of the disc and having the suture and sides paler, the prothorax more ferruginous in colour in some examples; the upper surfaee opaque, thickly clothed with fine silky pubescence, the prothorax and elytra finely transversely strigose. Head moderately large, the eyes black; antennæ rather short, thickening outwardly, joints 9 and 10 subtransverse, testaceous, the apical joints sometimes infuscate; palpi testaceous; prothorax about one half broader than long, feebly bisinuate at the base, moderately rounded at the sides, the hind angles rectangular; beneath varying in colour from testaceous to fuscous; legs entirely testaceous; sixth ventral segment partly exposed in the male, and sometimes visible in the female.
Length 2–3 millim. (♂ ♀.)

Hab. MEXICO, Northern Sonora (*Morrison*), Pachuca in Hidalgo, Mexico city, Cordova (*Höge*), Guanajuato (*Sallé*).

This species appears to be common in Mexico, whence we have received a large number of specimens. Those forwarded by Morrison from Sonora were labelled *Anaspis rufa*; the present insect, however, differs from *Anaspis* in having a well-developed bilobed penultimate joint to the anterior and middle tarsi. The entirely pale colour and the less elongate shape distinguish it at once from *P. quadriguttata*, and the larger size, longer antennæ, and immaculate elytra separate it from *P. unifasciata*; *P. decolor* is, however, not very closely allied to any of the other species here described, though *P. angustata* comes near it.

10. **Pentaria angustata.**

Moderately elongate, narrow, testaceous; the upper surface opaque, finely pubescent, the prothorax and elytra very finely transversely strigose. Head moderately large, the eyes black; antennæ rather short, thickening outwardly, joints 9 and 10 transverse, testaceous, the apical four joints a little darker; prothorax about one half broader than long, narrowing from the base, the sides very little rounded, the hind angles rectangular; beneath and the legs testaceous.
Length $1\frac{3}{4}$ millim. (♂.)

Hab. NICARAGUA, Chontales (*Janson*).

One male example. Narrower and smaller than *P. decolor*, the antennæ shorter, the thorax less rounded at the sides. The transversely strigose elytra and the longer and

more slender tibiæ (the hind pair longer than the two basal joints of the posterior tarsi united) distinguish it from all the species of the following genus, to some of which it bears a close resemblance.

NAUCLES.

Mandibles toothed within just before the apex; last joint of the maxillary palpi stout, oblong-ovate, very obliquely truncate at the apex, the apex acuminate; second joint of the labial palpi very stout, ovate, the apical joint quite slender and acuminate; lobes of the maxillæ narrow, rather long; mentum strongly transverse, narrowing a little in front; antennæ short, somewhat clavate, the penultimate joints transverse; eyes coarsely granulated; fourth joint of the anterior and middle tarsi bilobed, as broad as, but shorter than, the third; all the tibiæ short and compressed, considerably dilated towards the apex, the posterior pair not longer than, or scarcely as long as, the first two joints of the posterior tarsi united; upper surface very densely and minutely punctured, the punctures on the prothorax and on the extreme base of the elytra only forming faint transverse strigæ; ventral segments similar in both sexes, the sixth covered by the fifth; epipleuræ much narrowed behind the posterior coxæ, and extending to about the apex of the third ventral segment; body oblong, subovate; the rest as in *Pentaria*.

The above generic name is proposed to include several minute closely allied species from Central America. Most of the characters are very similar to those of *Pentaria*; but the short and conspicuously dilated tibiæ and the form of the labial palpi, the apical joint of which is very slender and acuminate, and the second joint very stout, forbid association with that genus. The four anterior tibiæ are broader at the apex and more compressed than in *Anaspis*, the hind pair similarly shaped. The short posterior tibiæ and the larger penultimate joint of the four anterior tarsi separate *Naucles* from *Cyrtanaspis*, Emery. The general shape is shorter and more ovate than in *Pentaria*. In the sculpture of the upper surface the genus differs from all the allied forms, there being no trace of transverse strigæ on the greater part of the elytra, the thorax and the extreme base of the elytra only, at most, being very faintly transversely strigose. The ventral segments, as in *Pentaria*, are without external appendages in the male. The characters of the mouth-parts are taken from *N. tibialis*. The species are very feebly differentiated, and in the absence of external male characters difficult to distinguish.

1. **Naucles tibialis.** (Tab. XI. figg. 6; 6 *a*, labium; 6 *b*, maxillary palpus.)

Oblong-ovate, entirely testaceous; the upper surface very densely and minutely punctured, the punctures on the prothorax and on the extreme base of the elytra only showing a tendency to form faint transverse strigæ, thickly clothed with very fine silky pubescence. Head moderately large, the eyes black; antennæ short (not nearly reaching the base of the prothorax when the head is extended), joints 1 and 2 oblong, stout, subequal, 3–6 more slender, 3 shorter than 2, 4 much shorter than 3, 4–6 subequal, 7–11 much wider than 6, 7 about as broad as long, 8–10 strongly transverse, 11 ovate, longer than 10, testaceous, the basal joints a little lighter in colour; prothorax about one half broader than long, feebly bisinuate at the base, the sides moderately rounded, the hind angles subrectangular; all the tibiæ becoming broadly dilated towards the apex, the hind pair not longer than the two basal joints of the posterior tarsi united.

Length 1¼–1½ millim. (♂ ♀.)

Hab. GUATEMALA, near the city (*Champion*).

Found in abundance by myself in the open country in the vicinity of the city of Guatemala.

2. Naucles basalis.

Oblong ovate, rather narrow; the head ferruginous; the prothorax piceous or fusco-ferruginous; the elytra piceous, the shoulders and the sides towards the apex indeterminately testaceous or reddish; the upper surface very densely and minutely punctured, the punctures forming faint transverse strigæ on the prothorax and on the extreme base of the elytra only, very finely and thickly pubescent. Head moderately large, the eyes black; antennæ as in *N. tibialis*, but with the joints 7–10 infuscate; prothorax about one half broader than long, moderately rounded at the sides; beneath piceous; legs testaceous.
Length $1\frac{1}{3}$–$1\frac{1}{2}$ millim.

Hab. Guatemala, Capetillo, San Gerónimo (*Champion*).

Two examples, one of which is a female. Closely allied to *N. tibialis*; the elytra piceous with a spot at the shoulders and the sides towards the apex reddish or testaceous; the intermediate joints of the antennæ infuscate.

3. Naucles quercus.

Oblong ovate, rather convex, entirely reddish-testaceous; the upper surface very densely and minutely punctured, the punctures forming very fine transverse strigæ on the prothorax and on the extreme base of the elytra, very finely and thickly pubescent. Head, prothorax, and antennæ much as in *N. tibialis*, the elytra more distinctly punctured; beneath ferruginous; legs testaceous.
Length $1\frac{1}{2}$ millim.

Hab. Mexico, near the city (*Flohr*).

Three examples, beaten from oaks in the vicinity of the city of Mexico, and recently forwarded to me by Mr. Flohr. Very near *N. tibialis*, from which it can only be distinguished by its more convex and rather broader shape, larger size, and more distinctly punctured elytra. A mutilated example from Guanajuato (*Sallé*) perhaps belongs to the same species.

4. Naucles affinis.

Oblong ovate, rather narrow, still narrower in the male, brownish-testaceous; the upper surface thickly clothed with fine silky pubescence, very densely and minutely punctured, the punctures forming very fine transverse strigæ on the prothorax and on the extreme base of the elytra. Antennæ brownish, with the basal joints paler; prothorax narrowing from the base, about one half broader than long, the sides feebly rounded; beneath ferruginous; legs testaceous.
Length $1\frac{1}{2}$–$1\frac{2}{3}$ millim. (♂ ♀.)

Hab. Panama, Peña Blanca (*Champion*).

Three examples. More elongate and less ovate than *N. tibialis* and *N. quercus*, the elytra punctured as in the latter.

ANASPIS.

Anaspis, Geoffroy, Hist. Ins. envir. Paris, i. p. 315 (1762); Lacordaire, Gen. Col. v. p. 613; Mulsant, Ann. Soc. Linn. de Lyon, 1856, p. 391; Leconte, Proc. Acad. Phil. xiv. p. 44; J. B. Smith, Trans. Am. Ent. Soc. x. p. 76.

This familiar genus is almost confined to the temperate regions of the northern hemisphere. One of the North-American forms extends southwards to just within our limits. *Anaspis* has been divided into several subgenera by Emery; the single species here recorded belongs to his section "*Anaspis* sensu stricto."

1. Anaspis atrata.

Anaspis atra, Lec. Ann. Lyc. N. York, v. p. 157 [1], & Proc. Acad. Phil. xiv. p. 45 [2]; J. B. Smith, Trans. Am. Ent. Soc. x. p. 77, t. 1. fig. 20 [3] (nec Fabr.).

Hab. North America, California [1 2], Colorado [3].—Mexico, Northern Sonora (*Morrison*).

Specimens received from the late Mr. Morrison are apparently referable to this species. Neither Leconte nor J. B. Smith mention the sex of the examples described by them: in the male of the Sonoran insect the fifth ventral segment is cleft down the middle from the apex nearly to the base, and from the apex of the third segment two long slender appendages are extruded, these being very narrowly separated and resting parallel to each other along the centre of the segments 3–5, and extending to the apex, the space between them smooth but not depressed. The insect is closely allied to *A. frontalis* (Linn.) and other European species.

Group **MORDELLIDES.**

This group is very largely represented in Central America, the majority of the species, as in other regions, belonging to *Mordella* or *Mordellistena.* One remarkable new genus is added, this being without the characteristic anal style, and thus differing from all other known members of the group. Most of the Central-American representatives are described as new, two only having hitherto been recorded from within our limits. In the descriptions of the new species the length-measurements are taken from the front of the thorax to the end of the elytra and from the front of the thorax to the tip of the pygidium when the insect is extended; and the breadth-measurements from the widest part of the thorax.

COTHURUS.

Last joint of the maxillary palpi exceedingly broad, large, and securiform, its apical side concave and nearly twice the length of the outer side, the latter not much shorter than the inner side; eyes finely granulated; scutellum trapezoidal, twice as broad as long, a little produced in the middle behind; the last dorsal segment obtuse at the apex, not prolonged into a style; metasternum sharply transversely keeled in front immediately behind the widely separated middle coxæ, its anterior edge vertical, the keel extending outwards

as far as the coxæ; penultimate joint of the four anterior tarsi dilated, excavate; hind tibiæ without oblique ridges on their outer face (the short subapical one excepted); body very broad, short; the form of the claws and other characters as in *Mordella*.

This new genus is proposed for a single species from Mexico. It is one of the most interesting forms of Mordellidæ yet discovered, differing as it does from all other members of the group Mordellides in the shape of the last dorsal segment and in that of the metasternum.

1. **Cothurus iridescens.** (Tab. XI. figg. 7; 7 *a*, maxillary palpus.)

Very broad, short, metallic blue, the prothorax in front and the head with brassy reflections; the elytra densely and coarsely, the prothorax more finely, punctured; the elytra, scutellum, disc of the prothorax, and the head in the middle sparsely blackish-brown-pubescent, the sides of the head and of the prothorax more densely clothed with whitish pubescence, the head golden-pubescent in front. Head exceedingly broad, short; the eyes very large, extending to the occiput, and thickly pubescent; the oral organs (the tip of the mandibles excepted) flavo-testaceous; antennæ flavo-testaceous, the outer four or five joints infuscate, slender, rather short, joints 3–5 thin, equal in length, 5 a little wider than 4, 6–10 serrate, 8–10 about as broad as long; prothorax strongly transverse, deeply sinuate on either side of the broad median basal lobe, the latter subtruncate; elytra convex, a little narrower than the prothorax, short, only about one and a half times as long as broad, broadly and separately rounded at the apex; the last four dorsal and ventral segments fulvous, thickly clothed with fulvous-golden-pubescence, the rest of the under surface obscure violaceous and yellowish-cinereous-pubescent; anterior and intermediate legs in great part and the hind tibial spurs testaceous; the hind femora, tibiæ, and tarsi black, the base of each tarsal joint sometimes paler; the inner spur of the hind tibiæ very elongate, three times as long as the outer one. Length to end of the elytra 3–3¼, breadth 1¾–2 millim.

Hab. Mexico, Cordova (*Sallé*).

Five examples. In some of these specimens the anterior tibiæ are more strongly bowed inwards than in others; the former, no doubt, are males. All have the palpi, antennæ, and pygidium similarly formed. Labelled *Mordella iridescens*, Chevr., in the Sallé collection.

TOMOXIA.

Tomoxia, Costa, Fauna Regn. Napol., Col. Eter. Mord. p. 8 (1854); Lacordaire, Gen. Col. v. p. 609.

Four species are here referred to this genus: two of these agree exactly in their general structure with the European type of the genus; the other two differ in having the scutellum less transverse, the middle tibiæ a little longer (not, however, exceeding the entire tarsus in length), the penultimate joints of the anterior and middle tarsi feebly dilated, and the last joint of the maxillary palpi not so stout. The North-American *T. bidentata* (Say) has the penultimate joints of the anterior and middle tarsi broader, and the eyes not extended to the occiput or lateral margin. In the European *T. biguttata* the eyes are hairy; but in *T. bidentata* and the species here described they are apparently bare.

a. *Scutellum about twice as broad as long, emarginate behind; penultimate joints of the anterior and middle tarsi filiform; middle tibiæ shorter than the tarsi of the same pair of legs; last joint of the maxillary palpi stout, subsecuriform; head moderately convex.*

1. **Tomoxia spinifer.** (Tab. XI. figg. 8, ♀; 8 *a*, hind leg, ♂.)

Short, broad, black; the head and prothorax with brown or griseous pubescence, that on the disc of the prothorax in light-coloured examples indeterminately darker; each elytron with a transverse or oblique spot of variable size on the middle of the disc a little beyond the middle—sometimes interrupted or in the form of an irregular angulated fascia, sometimes reduced to a small spot,—the suture, the base broadly in some examples, and, rarely, some markings at the apex, yellowish-grey- or griseous-pubescent, the rest of the surface with blackish or blackish-brown pubescence. Head exceedingly broad, moderately convex, the eyes reaching to the occiput; last joint of the maxillary palpi large, its outer and apical sides about equal in length, and each nearly twice as long as the inner side; antennæ moderately long, in the male slender, with the joints 5–10 feebly serrate, longer than broad, in the female shorter, with the joints 5–10 broader and more serrate, the penultimate ones about as broad as long, the apical joint scarcely emarginate on the inner side towards the tip; prothorax broadly and shallowly emarginate in the middle behind; scutellum transversely subquadrate, about twice as broad as long, emarginate in the middle behind; elytra broad, short, only about twice as long as the prothorax; epipleuræ broad at the base, but abruptly narrowed a little behind the anterior limit of the hind coxæ; pygidium moderately long, extending some distance beyond the hypopygium, a little shorter in the female, truncate at the apex; anterior and middle tarsi very slender and filiform, the penultimate joints not in the least dilated; middle tibiæ about the length of joints 1–4 of the tarsi of the same pair of legs; hind legs stout, the tibiæ as long as the basal two joints of the tarsi united; anterior tibiæ curved inwards from the base and the hind trochanters produced into a stout curved tooth in the male.

Length to the end of the elytra $4\frac{3}{4}$–$5\frac{1}{4}$, to tip of the pygidium $5\frac{2}{3}$–6, millim.; breadth $2\frac{1}{2}$ millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Belt*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Seven examples. This species resembles the European *T. biguttata*, Gyll., with which it agrees exactly in the form of the tarsi, scutellum, &c.; but it is much broader than that insect, and the elytra are relatively very much shorter. The reflexed limb of the elytra (viewed from the side) is very strongly sinuate; the hind coxæ are enormously developed; the pygidium is of similar form to that of *T. biguttata*. The amount of griseous pubescence varies considerably: in the single specimen from Chontales it is more extended, occupying the basal third of the elytra, and the post-median fascia is larger, and there are some markings at the apex; in one or two of the Chiriqui examples it is reduced to a very small spot behind the middle of the disc of the elytra, the rest of the pubescence being dark brown. *T. muriniceps*, Chevr., from Colombia, is apparently an allied species, but the brief diagnosis given by its author does not agree in several particulars with *T. spinifer*.

2. **Tomoxia contracta.** (Tab. XI. fig. 9, ♀.)

Short, moderately broad, black; the head and prothorax clothed with cinereous pubescence, the prothorax with a median vitta and a triangular spot on either side of it blackish-brown-pubescent; the elytra with a large oblong sublateral median patch, the suture, and the apex rather broadly, cinereous, the rest of the surface blackish-brown-pubescent; the pygidium cinereous-pubescent, blackish-brown along the centre. Head very broad, the eyes reaching to the occiput; last joint of the maxillary palpi large, subsecuriform;

antennæ (♀) short, joints 5–10 moderately serrate, 9 and 10 subtransverse; prothorax broadly emarginate in the middle behind; scutellum twice as broad as long, emarginate in the middle behind; elytra only about twice as long as the prothorax; pygidium (♀) very short, rather broadly truncate at the apex; anterior and middle tarsi very slender, filiform; middle tibiæ barely equalling in length joints 1–4 of the tarsi of the same pair of legs.

Length to end of the elytra $3\frac{1}{4}$, to tip of the pygidium $3\frac{2}{3}$, millim.; breadth $1\frac{2}{3}$ millim. (♀.)

Hab. Panama, Bugaba (*Champion*).

One female example. Very much smaller and relatively narrower than *T. spinifer*; the pygidium shorter and more obtuse in the female; the thorax and elytra differently marked. The elytral markings are very sharply defined.

b. *Scutellum subquadrate, as long as broad, not emarginate behind; penultimate joints of the anterior and middle tarsi feebly dilated, spongy-pubescent beneath; middle tibiæ as long as the tarsi of the same pair of legs; last joint of the maxillary palpi elongate-triangular; head very convex.*

3. **Tomoxia fulviceps.** (Tab. XI. fig. 10, ♂.)

Elongate, black; the head densely clothed with fulvous or golden-brown pubescence, the pubescence becoming darker in the middle and paler at the sides; the prothorax with a rather broad median vitta extending from the base to the apex, and widened in front, and an elongate-triangular mark or stripe on either side of it (extending from the base to beyond the middle), from which a short branch extends outwards, and meets an oblique stripe placed near the anterior margin, these markings for the greater part brownish-black, but becoming fulvous towards the anterior margin, the rest of the surface yellowish-cinereous-pubescent; the elytra with interrupted lines of cinereous pubescence extending to about a fourth from the apex, the apical fourth uniformly brown or fulvous-brown-pubescent, an oblique ill-defined brownish stripe extending from the shoulders downwards, the rest of the surface clothed with blackish pubescence. Head very convex, the eyes extending to the occiput; palpi testaceous, the last joint of the maxillary pair elongate-triangular, its outer side concave, its inner side a little longer than the apical side; antennæ (♂) testaceous, darker towards the apex, rather slender, joints 5–10 feebly serrate, longer than broad; prothorax rounded in the middle behind; scutellum quadrate, about as long as broad; elytra a little flattened on the disc, about two and a half times as long as the prothorax, the humeri somewhat swollen; pygidium (♂) short, rather broadly truncate at the apex; beneath cinereous-pubescent, the pubescence on the hind coxæ and on the last ventral segments yellowish or fulvous in colour; legs black, the knees and the base of the anterior femora obscure testaceous, the tibial spurs testaceous; anterior and middle tarsi with the third and fourth joints slightly dilated; middle tibiæ as long as the tarsi of the same pair of legs; posterior tibial spurs very long, the inner one much longer than the outer; the anterior femora and tibiæ (♂) slightly curved.

Length to end of the elytra $5\frac{2}{3}$–$6\frac{1}{4}$, to tip of the pygidium $6\frac{1}{2}$–$7\frac{1}{3}$, millim.; breadth $2\frac{1}{4}$–$2\frac{1}{3}$ millim. (♂.)

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*); Nicaragua, Chontales (*Belt*).

Three examples, all males. In its elytral markings this elegant insect somewhat approaches the North-American *T. lineella*, Lec., but the latter has not the apical fourth of the elytra uniformly brown-pubescent, and also differs in numerous other particulars.

4. **Tomoxia interrupta.** (Tab. XI. fig. 11.)

Elongate, black; the head densely clothed with golden-yellow-pubescence, a large dark brown patch in the middle extending to the base, the pubescence at the base between this spot and the eyes white; the

prothorax with a median vitta (narrowing in front and behind) and a large triangular mark on either side of this about the middle brownish-black, the rest of the surface with golden-cinereous pubescence, the pubescence whitish along the lateral margins; elytra with rather broad partly confluent lines of yellowish-cinereous pubescence, interrupted by an oblique spot on either side of the scutellum at the base, two parallel oblong marks below this, a quadrangular spot on either side of the suture about the middle, and an anteapical patch, these markings brownish-black-pubescent, the apical two-thirds of the suture cinereous. Head very convex, the eyes extending to the occiput; palpi coloured and formed as in *T. fulviceps*; antennæ short, testaceous, darker towards the apex, joints 5–10 moderately serrate, 9 and 10 about as broad as long; prothorax, scutellum, and elytra formed as in *T. fulviceps*; pygidium very short, broadly truncate at the apex; beneath with a good deal of whitish pubescence, that on the last ventral segment yellowish; legs black, the coxæ and femora of the anterior and middle pairs and all the tibial spurs flavo-testaceous; anterior and middle tarsi with the third and fourth joints very feebly dilated; middle tibiæ as long as the tarsi of the same pair of legs; posterior tibial spurs moderately long, the inner one much longer than the outer; the anterior femora and tibiæ slightly curved.

Length to end of the elytra 4–4½, to tip of the pygidium 4½–5⅓, millim.; breadth 1¾–2 millim.

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*); Panama, Bugaba (*Champion*).

Two examples, agreeing exactly with each other, apparently both males. Smaller than *T. fulviceps*; the markings of the upper surface very different; the anterior and middle femora entirely flavo-testaceous.

GLIPA.

Glipa, Leconte, Col. of Kansas & Eastern New Mexico, p. 17 (1857).

The characters of this genus as given by Leconte are:—"The last joint of the maxillary palpi strongly dilated, securiform (in the form of an isosceles triangle, attached by its apex); the outer joints of the antennæ triangular; the scutellum triangular, rounded at the apex; the middle tibiæ longer than the tarsi; the posterior tibiæ only moderately dilated, longer than the first joint of the tarsi, and destitute of oblique ridges; the anal style short, truncate, and subemarginate; the body slender." The single species included in it by Leconte, *Mordella hilaris*, Say, also inhabits Central America. J. B. Smith, in his "Monograph of the Mordellidæ of the United States" (Trans. Am. Ent. Soc. x. pp. 73 *et seq.*), merges the genus *Glipa* into *Tomoxia*: he overlooking altogether the abnormally elongate middle tibiæ, the very long elytra, and other characters. The thorax is much broader than the elytra; the elytra are very elongate (relatively longer than in *Tomoxia* or *Mordella*), with the sides almost straight, but gradually converging from the base; the anterior and middle tarsi have their third and fourth joints moderately dilated, and (with the base of the second) spongy-pubescent beneath; the eyes are finely granulated and pubescent. Various species from the tropical regions of the Old World belong to it; and two from Brazil have been described by Chevrolat.

1. **Glipa hilaris.** (Tab. XI. fig. 12, ♂.)

Mordella hilaris, Say, Bost. Journ. Nat. Hist. i. p. 190 (1835)[1]; Complete Writings, ii. p. 661.
Glipa hilaris, Lec. Col. of Kansas & Eastern New Mexico, p. 17[2]; Proc. Acad. Phil. xiv. p. 46[3].

Tomoxia hilaris, J. B. Smith, Trans. Am. Ent. Soc. x. pp. 79, 80, t. 1. figg. 30, 32[4].
Glipa hieroglyphica, Schwarz, Proc. Am. Phil. Soc. xvii. p. 372[5].

Hab. North America, Indiana[1], Middle and Western States[3 4], Florida[5].—Mexico, Playa Vicente (*Sallé*); Nicaragua, Chontales (*Belt*).

Three specimens of this species have been received from Central America. They agree well with a female example from the United States kindly forwarded by Dr. Horn. The elytral markings are variable, but the general pattern is constant; the head is angularly extended beyond the eyes; the anterior femora are more or less testaceous towards the base. The Nicaraguan specimen is of the male sex: it has the anterior tibiæ bowed inwards from the middle; the anterior femora and the basal portion of the anterior tibiæ fringed with long hairs within; and the fifth ventral segment broadly and deeply excavate along the centre from the apex nearly to the base. Schwarz's description of *G. hieroglyphica*[5] is evidently based upon male examples, as he mentions the excavate fifth ventral segment; he gives as a possible male-character "penultimate joint of the maxillary palpi fringed internally with dense whitish pubescence," but this is not evident in the Nicaraguan male.

MORDELLA.

Mordella, Linnæus, Syst. Nat. 10th edit. i. p. 420 (1758); Lacordaire, Gen. Col. v. p. 609.
Sphalera, Leconte, Col. of Kansas & Eastern New Mexico, p. 17 (1859).

This genus contains an immense number of species from all parts of the world, and it is, no doubt, more numerously represented in tropical than in temperate regions. One only has hitherto been recorded from within our limits, whence fifty-eight are now enumerated; nineteen only are known from America north of Mexico. Comparatively few species of *Mordella* have been described as yet from Tropical South America (and those chiefly Brazilian); but some hundreds must exist there. As in *Tomoxia*, two groups of species are indicated—one with the penultimate joint of the four anterior tarsi dilated and excavate (as in the type of the genus), and the other with this joint simple. Both groups include species with the antennæ clavate and species with the antennæ only moderately widened or slender. Upon a member of the clavate series (with dilated penultimate tarsal joints) Leconte founded (and subsequently abandoned) his genus *Sphalera*. The form of the fourth antennal joint is an important specific character in this genus, but, like that of the tarsi, it seems to have escaped the notice of authors. The antennæ in most of the species differ very little sexually; in *M. chevrolati* the apical joint is elongated in both sexes, and is longer in the male than in the female. The last joint of the maxillary palpi varies greatly in shape according to the species, and in a few cases differs sexually: in the male of *M. biformis* it is securiform, and very much broader than in the female; in the male of *M. fenestrata*

it is quadrangular, and more than twice as broad as long. In one or two species the thorax and pygidium are black in the male and rufous in the female; in two or three others, of small size, there is a trace of a faint carina on the outer edge of the hind tibiæ. All the species here referred to *Mordella* have the hind tibiæ without oblique ridges on their outer face (the short subapical one excepted), the scutellum triangular, and the eyes finely granulated. The antennæ vary in shape according to the species from clavate to subfiliform, and the pygidium from short and obtuse to long and acuminate. The eyes very nearly or quite reach the occiput in all the Central-American species, the head, at most, being very narrowly extended behind them. A few of the species with a simple penultimate joint to the four anterior tarsi have the intermediate tibiæ distinctly shorter than the tarsi of the same pair of legs (the reverse being the case in the genus *Glipa*); and in certain of the species with a simple penultimate tarsal joint the antennæ have some of the joints (the apical one or two, or joints 5–7 or 6 and 7) yellow, and the preceding or following joints black. *M. fenestrata* is perhaps generically distinct from *Mordella*; but as *Mordellistena* includes species with the palpi somewhat similarly shaped in the male it is inadvisable to separate it. The three species here placed at the head of the genus, all of very large size, have a strong oblique callus extending from the shoulders downwards towards the suture, the disc of the elytra thus appearing to be flattened or depressed. *M. quadrisignata* varies to a great extent in the size and shape of the pubescent spots on the elytra and also in the colour of the pubescence of the under surface. In this insect, as in the majority of the *Mordellæ*, the markings of the thorax and elytra are formed entirely by the arrangement of the pubescence; but in several of the species here described the markings are derived from the ground-colour. The eyes are clothed with a short erect pubescence in many species: this pubescence, however, is easily abraded, and is only visible in fresh examples.

The following table will assist in the identification of the Central-American species:—

Apical joint of the maxillary palpi more or less securiform, triangular, or ovate, in some species stouter in the male.

Fourth joint of the anterior and intermediate tarsi more or less dilated and excavate, and extended beneath the base of the apical joint.

Elytra with a very prominent oblique callus extending from the shoulders downwards towards the suture; the pygidium very long; species cuneiform, very large, black, with whitish-, golden-, or fulvous-pubescent spots or markings.

Antennæ with joints 5–11 broadly widened and forming an elongate club, 6–10 very strongly transverse . . . . . Species 1, 2.

Antennæ with joints 5–11 feebly dilated, equal in width, 6–10 fully as long as broad . . . . . Species 3.

Elytra flattened on the disc or convex, without prominent callus.

Antennæ with joints 5–11 broadly widened and forming an elongate club, the penultimate joints strongly transverse, the fourth joint narrow.

Body entirely black; elytral pubescence uniform . . . . . Species 4.

Body metallic bluish-green; elytral pubescence uniform; pygidium short . Species 5.

Body black; æruginous-pubescent, the thorax and elytra with black markings; pygidium moderately long . . . . . Species 6.

Body black; densely cinereo-pubescent, the thorax and elytra with black markings; pygidium rather short . . . . . Species 7.

Body black, the elytra brownish-yellow or fulvous, with a large scutellar patch and the suture black; the elytral pubescence in great part yellowish-cinereous; pygidium short . . . . . Species 8.

Antennæ with joints 5–11 moderately widened or slender, the fourth joint not or very little stouter than the third *.

Body black; elytral pubescence uniform or with single intermixed cinereous hairs; pygidium moderately long . . . . . Species 9.

Body black, the thorax or the thorax and elytra with cinereous- or fusco-cinereous-pubescent markings or spots (*M. signata*, var. *β*, excepted).

Species cuneiform, large or moderately large, with long stout pygidium, the latter truncate at the tip . . . . . Species 10–12.

Species smaller, with more slender pygidium . . . . . Species 13–18.

Species small, with long and very slender pygidium, the latter acuminate . Species 19, 20.

Body black, the humeri sometimes fulvous, the elytra with oblique narrow lines of yellowish-cinereous pubescence; pygidium rather short . . . Species 21.

Body black, with the suture narrowly and an oblique narrow line on the basal half of the elytra cinereo-pubescent; pygidium rather short . . Species 22.

Body black, with silvery-pubescent spots on the thorax and on the base of the elytra, the latter with more than the apical half brown-pubescent; the head silvery-pubescent at the sides, blackish in the middle; pygidium not very long . . . . . Species 23, 24.

Body black, the thorax usually rufous, the elytra with more than the apical half brown-pubescent, and with some cinereo-pubescent markings on the basal part; pygidium rather short; antennæ with the penultimate joints transverse . . . . . Species 25.

Body black, the elytra with the sides broadly fulvo-rufous at the base; the thorax and elytra with bright silvery-pubescent markings, the elytra with a broad anteapical belt of brownish pubescence; the head silvery-pubescent at the sides, brown-pubescent in the middle; pygidium long . Species 26.

Body black, the elytra with an oblique fulvous stripe extending from the shoulders towards the suture, the suture and an anteapical fascia yellowish-cinereous-pubescent; pygidium rather short . . . . . Species 27.

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* In our unique example of *M. nigromaculata* the antennæ are broken off, but the species apparently belongs to this section.

Body black, the elytra with a long and broad rufous sublateral stripe and some yellowish pubescence; the antennæ and pygidium long and slender . . . . . Species 28.

Body black, the thorax at the base laterally and the elytra reddish-brown, the elytra with two long oblique stripes of yellowish pubescence; pygidium very long and slender . . . . . Species 29.

Body black; the head and thorax with a line of silvery or golden pubescence on either side; the elytra with two narrow fasciæ (one below the base, the other beyond the middle) and sometimes the apex golden-pubescent; antennæ very long, flavo-testaceous; pygidium acute, rather short . Species 30.

Body black, the elytra with two broad fulvous or flavous fasciæ (one before, the other beyond the middle), the pubescence partaking of the ground-colour; pygidium long and slender . . . . . Species 31.

Body only in part black; the sides and front of the head and the thorax, except in the middle, flavo-testaceous; the elytra black, with two flavo-testaceous fasciæ (one before, the other beyond the middle); pygidium long and slender . . . . . Species 32.

Body reddish-yellow, the elytra with the apex, a median fascia, and some spots black; pygidium very long and slender . . . . . Species 33.

Body black, the humeri obscure testaceous; the elytra with the suture, some markings at the base, and two fasciæ beyond the middle brownish-cinereous-pubescent; the thorax with three broad black vittæ; pygidium very broad, conical, short . . . . . Species 34.

Body black, the elytra with the suture and a broad oblique vitta extending from the shoulder to the apex yellowish-cinereous-pubescent; pygidium long, acuminate . . . . . Species 35.

Antennæ with joints 4–11 moderately widened or slender, the fourth joint not very much narrower or shorter than the fifth.

Body black, uniformly pubescent . . . . . Species 36.

Body black, the elytra with cinereo-pubescent spots or markings; species moderately large or small, with long or comparatively long pygidium; last joint of maxillary palpi stout, in some species stouter in the male . Species 37–42.

Body black; the thorax and pygidium black in the male (*M. biformis*), more or less rufous in the female; the elytra with cinereo-pubescent markings; pygidium very long, moderately stout; (last joint of maxillary palpi of *M. biformis* broad and securiform in male, elongate-triangular in female) . . . . . Species 43, 44.

Body only in part black, the head rufous, the base and sides of the thorax and a narrow oblique vitta on each elytron flavo-testaceous, the pubescence partaking of the ground-colour; pygidium long and very slender . . . . . Species 45.

Body only in part black, the head laterally and in front, the thorax (except along the middle), a broad oblique stripe on each elytron, and the pygidium flavous; the latter long and very slender . . . . . Species 46.

Fourth joint of the anterior and intermediate tarsi dilated and excavate, extended beneath the apical joint to two-thirds of its length; species small, short, broad, with the head in part, the thorax at the sides in front, and the extreme apex of the elytra testaceous, the pubescence partaking of the ground-colour; antennæ very slender; pygidium long and slender; apical joint of the maxillary palpi broadly securiform . . . . . Species 47.

Fourth joint of the anterior and intermediate tarsi filiform, simple.

Intermediate tarsi and tibiæ about equal in length; body black or pitchy-brown, the elytra with golden- or cinereo-pubescent spots; pygidium short, conical; apical joint of the maxillary palpi comparatively slender.

Antennæ with joints 6–11 broadly dilated, and forming an elongate club; joints 6 and 7 yellow, 8–11 black . . . . . Species 48.

Antennæ with joints 5–11 broadly dilated, and forming an elongate club, the penultimate joints transverse.

Antennal joints 5–9 black, 10 and 11 yellow . . . . . Species 49, 50.

Antennal joints 5–7 yellow, 8–11 black . . . . . Species 51.

Antennæ with joints 5–11 moderately widened, the penultimate joints almost or quite as long as broad; joints 8–10 infuscate, 11 yellow.

Size rather large; the thorax with golden-pubescent spots; the pygidium obtuse . . . . . Species 52.

Size very small; the thorax with three vittæ; the pygidium pointed . . Species 53.

Intermediate tarsi longer than the tibiæ of the same pair of legs; body black or pitchy-brown, the thorax and elytra with or without cinereous- or yellowish-pubescent markings; antennæ slender, joints 5–11 a little widened.

Apical joint of the maxillary palpi elongate-triangular; each elytron with a **T**-shaped mark at the middle and a curved anteapical fascia cinereo-pubescent; the thorax with three black vittæ . . . . . Species 54.

Apical joint of the maxillary palpi oblong-ovate, obliquely truncate at the apex; the elytra with numerous spots and a post-median fascia cinereo-pubescent . . . . . Species 55, 56.

Apical joint of the maxillary palpi stout, elongate-triangular; thorax and elytra uniformly pubescent . . . . . Species 57.

Apical joint of the maxillary palpi in the male subquadrangular, more than twice as broad as long; fourth joint of the anterior and intermediate tarsi dilated and excavate . . . . . Species 58.

1. **Mordella clavicornis.** (Tab. XI. fig. 13, var. *imperator*.)

Mordella clavicornis, Kirby, Trans. Linn. Soc. xii. p. 424 (1818[1]).

Mordella lunata, Sturm, Cat. p. 71, t. 3. fig. 24 (1826)[2].

Mordella lunifera, Dej. Cat. 3rd edit. p. 240[3].

Mordella nobilis, Dej. Cat. loc. cit.[4].

Mordella pugionata, Dej. Cat. loc. cit.[5].

Mordella imperator, Cast. Hist. Nat. Ins., Col. ii. p. 265[6]; Lacord. Gen. Col. v. p. 609, nota 2[7].

Hab. Mexico, Vera Cruz (*Sallé*); British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Panzos (*Conradt*); Nicaragua, Chontales (*Belt*, *Janson*); Panama, Volcan de Chiriqui, Tolé (*Champion*).—Brazil [1 2 3 4 5 6 7].

A variable species. Two forms occur:—(1) The elytra each with two small silvery- or golden-pubescent spots placed obliquely some little distance below the base and a transverse crescent-shaped larger mark at about one-third from the apex (*M. imperator*, Cast.); (2) the elytra with only the anteapical crescentiform mark (*M. clavicornis*, Kirby, *M. lunata*, Sturm). Examples of both forms are before me from British Honduras, Nicaragua, and the State of Panama, and also from Brazil. *M. clavicornis* is closely allied to *M. quadrisignata*, but differs in its elytral markings and in having the oblique humeral callus more prominent, and continued for at least three-fourths of the length of the elytra, enclosing a large elongate-triangular depressed space. The pygidium is more compressed at the sides, more sharply pointed, and, if anything, longer; in the male it is more than twice the length of the hypopygium. The underside is in most specimens entirely black; but in a few of the var. *imperator* the sides or base of the ventral segments have a little whitish or golden pubescence. The other characters are very much the same as in *M. quadrisignata*. The length of the insect, from the front of the thorax to the tip of the elytra, varies from $6\frac{1}{2}$–$10\frac{1}{2}$ millim., the pygidium from 3–5 millim.

2. **Mordella quadrisignata.** (Tab. XI. figg. 14–18.)

Mordella quadrisignata, Chevr. Col. Mex., Cent. i. fasc. 3, no. 55 (1834)[1].

An exceedingly variable species, as regards the colour—fulvous, ochreous, golden-yellow, or ashy—and size of the elytral and thoracic pubescent spots, those on the thorax being sometimes entirely absent, and those on the elytra being sometimes greatly enlarged, and sometimes much reduced in size, the anterior one occasionally entirely obsolete.

Eight well-marked forms occur:—

α. The elytra each with two rounded spots of moderate size (the posterior ones usually the largest) and a faint or small scutellar patch golden-yellow- or ochreous-pubescent; the thorax with the base on either side of the scutellum and a very faint curved or angular line on either side of the disc anteriorly (often obsolete) ashy-pubescent. This is the form described by Chevrolat[1]. (Fig. 14.)

Hab. Mexico, Vera Cruz[1] (*Sallé*); Guatemala, San Juan in Vera Paz (*Champion*); Nicaragua, Chontales (*Janson*, *Belt*); Panama, Volcan de Chiriqui (*Champion*).

Six examples.

β. The elytral spots ashy or whitish, smaller, sometimes very small, the scutellar patch usually present; the thorax usually with a triangular spot on either side at the base and a ¬-shaped line on either side of the disc anteriorly whitish-pubescent. (Fig. 15.)

Hab. Mexico, Cerro de Plumas (*Höge*); British Honduras, R. Sarstoon (*Blanca-*

neaux); Guatemala, Volcan de Atitlan (*Champion*); Costa Rica, Irazu (*Rogers*); Panama, Volcan de Chiriqui (*Champion*), Chiriqui (*Trötsch*).

Numerous examples.

γ. The elytral spots ochreous, larger, the scutellar patch obsolete; the thorax without markings.

Hab. Panama, Volcan de Chiriqui (*Champion*).

One example.

δ. The elytral spots golden-yellow, ochreous, or fulvous, still larger—the anterior ones rounded or slightly oblong, the posterior ones showing a tendency to form a broad fascia interrupted at the suture,—the scutellar patch large; the thoracic markings larger and more distinct, the triangular mark at the base extending forwards and nearly meeting the anterior ¬-shaped mark, so as to partly enclose a large spot of black pubescence. (Fig. 16.)

Hab. Guatemala, El Tumbador, Cerro Zunil, San Isidro, Zapote (*Champion*), Tepan (*Conradt*); Nicaragua, Chontales (*Belt*); Panama, Chiriqui (*Trötsch*).

Obtained in plenty by myself on the Pacific slope of Guatemala.

ε. The elytral spots ochreous or fulvous, exceedingly large—the anterior ones oblong, the posterior ones forming a very broad anteapical fascia narrowly interrupted at the suture,—the scutellar patch obsolete or very small; the thorax without markings. (Fig. 17.)

Hab. Mexico, Yolotepec (*Sallé*), Cerro de Plumas (*Höge*); Guatemala, El Tumbador, Cerro Zunil (*Champion*).

Six examples.

ζ. The elytral spots ochreous—the anterior ones minute, the posterior ones in the form of a broad anteapical fascia narrowly interrupted at the suture,—the scutellar patch obsolete; the thorax without markings.

Hab. Guatemala, Calderas, Capetillo (*Champion*).

Two examples.

η. The elytral spots ochreous or fulvous—the anterior ones and the scutellar patch entirely obsolete, the posterior ones in the form of a broad anteapical fascia narrowly interrupted at the suture; the thorax without markings.

Hab. Guatemala, Capetillo, Dueñas, San Gerónimo (*Champion*).

Three examples.

θ. As in η, but with the posterior spots narrowing behind and extending nearly to the apex (occupying nearly a third of the entire length of the elytra). (Fig. 18.)

Hab. Mexico, Cordova (*Sallé*), Cerro de Plumas (*Höge*).

Three examples.

This is one of the finest of the Central-American species of Mordellidæ. There can be no doubt that the various forms all belong to one and the same species, the large number of examples (fifty) before me being connected one with another by numerous gradations. Two or three of the varieties occur in the same localities. The light-

coloured pubescent spots at the sides of the ventral segments and on the sides of the breast are equally variable:—in α, β, δ, ε they are more or less well marked, in γ, ζ, θ they are altogether obsolete, and in η they are very small or quite obliterated. The antennæ in both sexes have their joints 5–10 broadly serrate, 7–10 being very strongly transverse; the head is very narrowly extended behind the eyes and distinctly canaliculate; the elytra are flattened on the disc, and have a long oblique humeral callus; the pygidium is very long and acuminate (in some specimens fully equalling half the length of the elytra), only a little shorter in the female, about twice the length of the hypopygium; the penultimate joints of the anterior and middle tarsi are moderately widened; the anterior tibiæ are slightly curved in the male; the last joint of the maxillary palpi is triangular, not very stout. Var. δ bears the name *M. terminalis*, Chevr., in the Sallé collection. The insect varies in length from $7\frac{1}{2}$–$10\frac{1}{2}$ millim. (pygidium excluded), the pygidium from 3–$4\frac{1}{2}$ millim.

3. **Mordella picta.** (Tab. XI. figg. 19–21.)

Mordella picta, Chevr. in Guérin's Icon. Regn. Anim., Ins. p. 130, t. 34. figg. 7, 7 *a–c* [1].

Like *M. quadrisignata*, Chevr., a very variable species, as regards the colour—ashy, golden, or fulvous—and pattern of the thoracic and elytral pubescent markings. The insect is apparently much rarer than *M. quadrisignata*; but the few examples received of the different forms clearly run one into the other, though none of them agree exactly in the elytral markings with the type. The following variations occur:—

α. Head, two transverse lines on the thorax—one along the base, the other towards the anterior margin, the latter with a short line extending downwards on either side of the middle,—the scutellum, the commencement of the suture, two punctiform spots towards the middle, and two fasciæ—the first elbowed, the second widened in front, without reaching the suture,—cinereo-pubescent.

Hab. Guiana, Cayenne [1].

β. Head, three transverse lines on the thorax—one along the base, rather broad, the others narrow, one towards and the other along the anterior margin,—the scutellum, an oblique stripe on the disc before the middle—very nearly coalescent with an oblong antemedian sutural patch (forming with this and the oblique mark on the opposite elytron a large **V**-shaped mark), and with a transverse ramus in front extending outwards,—an anteapical fascia (narrowing outwardly), and the suture from the base to the antemedian patch and from this to the anteapical fascia yellowish-cinereous. (Fig. 19.)

Hab. Panama, San Feliz in Chiriqui (*Champion*).

One example.

γ. Head in front and narrowly along the base, three transverse lines on the thorax—one at the base, rather broad, one a little distance before and another along the anterior margin, both narrow, the former with a short line on either side of the middle extending downwards,—the suture nearly to the middle, broadly so behind, a punctiform spot on the disc a little below the base, a faint transverse mark between this and the lateral margin, and a broad anteapical fascia, nearly reaching the suture and excised on its anterior edge, yellowish-cinereous; the scutellum black. (Fig. 20.)

Hab. Nicaragua, Chontales (*Belt*).

One example.

♂. The markings ashy, golden, or fulvous, those on the thorax partly or almost entirely obliterated; the sutural stripe extending to the anteapical fascia, the former widened at the middle, the latter broad and extending completely across, the other markings on the disc towards the base obsolete; the scutellum black. (Fig. 21.)

Hab. Mexico, Orizaba (*Sallé*); Guatemala, Coban (*Conradt*).

Four examples, three from Guatemala, one from Mexico.

The amount of cinereous pubescence on the sides of the ventral segments and metasternum is also variable, the pubescence on the underside being sometimes entirely black, sometimes in great part cinereous. The oblique humeral callus is prominent and continued nearly to the apex of the elytra (the sutural region appearing to be much depressed, owing to the convexity of the adjoining portion of the elytra); but it is less distinct in the single female specimen received. The pygidium is strongly compressed at the sides; in the male it is very long and acuminate, two or three times the length of the hypopygium, and not very much shorter than the elytra (measuring from 5–6 millim.); in the female it is more obtuse at the tip, and a little shorter, though more than twice the length of the hypopygium. The length of the insect, from the front of the thorax to the tip of the elytra, varies from 7–10 millim. *M. picta* is allied to *M. quadrisignata* and *M. clavicornis*, but differs from both in its very much more slender antennæ, as well as by the elytral markings. The elytra appear to be more narrowed behind in the male than in the female. The head is very narrowly extended behind the eyes.

4. **Mordella melæna.**

Mordella melæna, Germ. Ins. spec. nov. p. 169[1]; Lec. Proc. Acad. Phil. xiv. p. 46[2]; J. B. Smith, Trans. Am. Ent. Soc. x. pp. 80, 82, t. 1. fig. 33[3]*.

Sphalera melæna, Lec. Col. Kans. & East. New Mexico, p. 17[4].

Hab. North America[1 4], Middle, Southern, and Western States[2 3].—Mexico, Peras, Playa Vicente, Cordova, Tehuantepec (*Sallé*), Jalapa, Oaxaca, Tapachula (*Höge*), Atoyac (*H. H. Smith*); British Honduras, R. Sarstoon (*Blancaneaux*); Guatemala (*Sallé*), Coban, Panzos (*Conradt*), San Juan in Vera Paz, Senahu, Sinanja, Chacoj, San Gerónimo, San Isidro, Zapote (*Champion*); Nicaragua, Chontales (*Belt, Janson*); Costa Rica, Volcan de Irazu (*Rogers*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Var. ? Smaller and less elongate; the antennæ less broadly clavate, joints 6–10 strongly transverse, 11 not much narrower than 10; the pygidium moderately long.

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

A common insect throughout Central America. The species differs from *M. scutellaris* and *M. atricolor* by its short clavate antennæ, the latter with joints 5–10 strongly

* The antennæ as represented in this figure are purely imaginary.

transverse. In six specimens of small size from the State of Panama the antennal joints 5–11 are less widened, and 11 is very little narrower than 10; these examples are connected by intermediate forms and apparently belong to the same species. The pygidium varies in length, but it is usually short and blunt at the tip in both sexes. In the single specimen (of large size) from the Volcan de Irazu the antennæ are still more strongly clavate, and the pygidium is longer than usual; others from Oaxaca, collected with the ordinary form, also have the pygidium unusually elongate; two from Guatemala (*Sallé*) have traces of a median groove on the upper portion of the head. The second joint of the maxillary palpi is more slender than in *M. scutellaris*. The genus *Sphalera*, Lec., was based upon this species. Like many other *Mordellæ*, *M. melæna* varies very greatly in size.

5. **Mordella metallica.** (Tab. XI. fig. 22.)

Short, broad, metallic bluish-green with brassy reflections, the upper surface rather sparingly punctured, sparsely clothed with blackish pubescence, the pubescence on the pygidium, scutellum, head, and anterior margin of the prothorax cinereous. Head obsoletely canaliculate behind, emarginate in the middle at the base; palpi testaceous, the last joint of the maxillary pair darker, the latter stout, cultriform; antennæ with the basal five joints testaceous, the rest black, very short and clavate, joint 5 triangular, much wider than 4, 6–11 broadly widened and forming a compact club, 7–10 more than twice as broad as long; prothorax bisinuate and with a projecting median lobe in front, distinctly depressed within the basal margin on either side of the middle; scutellum large, triangular; elytra more than twice as long as the prothorax, rather convex, gradually narrowing from the base, the suture a little depressed beyond the middle; beneath cinereo-pubescent, the sides metallic green, the ventral segments more obscure; pygidium very short and stout, truncate at the apex, about one and a half times the length of the hypopygium; legs black, rather stout.

Length to end of the elytra 5, to tip of the pygidium $5\frac{1}{2}$, millim.; breadth $2\frac{1}{2}$ millim.

Hab. Mexico, Playa Vicente (*Sallé*).

This peculiar species agrees very closely with the description of the European *M. viridipennis*, Muls.; but it is evidently much broader in shape, and has more clavate antennæ and a much shorter pygidium. The only other American species of Mordellidæ known to me with similar coloration is *Cothurus iridescens*. The pubescence of the upper surface is rather sparse and it does not hide the punctuation, which is only moderately dense upon the elytra and more diffuse and finer upon the thorax. One specimen only has been received; it is probably a female.

6. **Mordella æruginosa.** (Tab. XI. fig. 23.)

Elongate, rather broad, cuneiform, black; the head clothed with coarse ashy-æruginous pubescence; the prothorax with two narrow parallel black lines on the middle of the disc (nearly reaching the base), for the rest thickly clothed with coarse ashy-æruginous or æruginous pubescence; the scutellum and elytra æruginous-pubescent; the latter with a rather broad angulated fascia just beyond the middle, two narrow parallel slightly oblique stripes on the disc extending from the base to the fascia, a short oblique humeral stripe, the suture very narrowly, and the apex black; the pygidium ashy- or ashy-æruginous-pubescent, with a narrow black line along the middle. Head obsoletely canaliculate; last joint of the maxillary palpi long and stout, cultriform, its apical and outer sides subequal, fully twice

the length of the inner side; antennæ black, the basal four joints testaceous or fusco-testaceous, joints 3 and 4 slender, 5–11 very broadly flattened, 5–10 strongly serrate, 5 more than twice the width of 4 and longer than 6, the penultimate joints strongly transverse; elytra moderately long; beneath and the legs æruginous-pubescent; pygidium rather stout, moderately long, blunt at the tip, about twice the length of the hypopygium; legs, including the tibial spurs, black.

Length to end of the elytra $5\frac{1}{2}$–6, to tip of the pygidium $6\frac{1}{2}$–7, millim.; breadth $2\frac{1}{2}$–$2\frac{2}{3}$ millim.

Hab. Mexico, Cordova (*Sallé*).

Two examples only of this remarkable species have been received; these agree precisely with each other in their external characters, though they are apparently male and female. The pubescence is dense, coarse, and scaly, and of a pale bluish-verdigris colour, but in certain lights it appears to be cinereous. No species of *Mordella* with similarly coloured pubescence is known to me. The antennæ are broadly flattened and serrate from the fifth joint.

7. **Mordella dilaticornis.** (Tab. XI. figg. 24; 24 *a*, antenna.)

Elongate, cuneiform, black; densely cinereo-pubescent, the pubescence on the prothorax yellowish in tint; the prothorax with four small black spots placed transversely (two close together on the middle of the disc behind and two external to these a little more forward), the elytra with a small spot on either side of the suture near the base, a transverse fascia just beyond the middle, not reaching the suture and widening outwardly, and the apex, black; the pygidium cinereo-pubescent at the sides, black along the middle. Head grooved in the middle behind; antennæ black with the basal four joints reddish, short and clavate, joint 5 triangular, very much wider than 4, 6–10 short, widened, broadly serrate, 7–10 about twice as broad as long; elytra moderately long, rapidly narrowing from the base, flattened on the disc, declivous laterally, the shoulders prominent, the sides straight; beneath cinereo-pubescent; pygidium rather short, twice the length of the hypopygium, obtuse at the tip; legs black, the tibial spurs pitchy-red.

Length to end of the elytra 6, to tip of the pygidium 7, millim.; breadth $2\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

One example only of this very distinct species was obtained. In the short clavate antennæ it approaches *M. clavicornis* and *M. quadrisignata*, this character separating it from all the other somewhat similarly marked Central-American species. The spots or markings of the thorax and elytra are comparatively small, so that by far the greater portion of the surface is covered by cinereous pubescence. The six outer joints of the antennæ form a compact club.

8. **Mordella triangulifer.** (Tab. XI. fig. 25.)

Moderately elongate, rather broad, black; the head, prothorax, and scutellum densely clothed with yellowish-cinereous pubescence, the prothorax with a narrow blackish-pubescent stripe on either side of the middle of the disc (extending almost from the base to a little beyond the middle and widening anteriorly) and a similarly coloured spot on either side of these externally; the elytra brownish-yellow or fulvous, with a very large, broad, triangular common basal patch and the suture narrowly from this to the apex black, in one example with a broad interrupted postmedian fascia and the apex pitchy-brown, the pubescence in great part yellowish-cinereous, the triangular basal patch (except along the base and suture) blackish-pubescent, the apex and the postmedian fascia brown-pubescent; the pygidium yellowish-cinereous-pubescent, the apical half blackish-brown. Palpi obscure testaceous, the apical joint of the maxillary

pair subtriangular, not very broad, its inner and apical sides about equal in length, and both much shorter than the outer side; antennæ piceous with the four basal joints testaceous, short, joints 3 and 4 slender, about equal in length, 4 a little stouter than 3, 5–11 widened, 5–10 gradually increasing in width and decreasing in length, 5 triangular, longer than broad, 6 about as broad as long, 7–10 very strongly transverse, strongly serrate, 11 subtriangular, narrower and a little longer than 10; elytra rather short; beneath densely yellowish-cinereous-pubescent; pygidium short, blunt at the tip, about twice the length of the hypopygium; legs, including the tibial spurs, black or piceous, the anterior and middle femora obscure testaceous.

Length to end of the elytra 3–4⅓, to tip of the pygidium 3⅓–4¾, millim.; breadth 1⅓–2 millim.

Hab. Mexico, Cordova (*Sallé*).

Two examples, one in very good condition, the other denuded of pubescence. In the structure of the antennæ this small species approaches *M. clavicornis*, *M. quadrisignata*, &c. The coloration of the elytra somewhat resembles that of *M. rufovittata*, but *M. triangulifer* differs greatly from that insect in the form of the antennæ and pygidium. In one specimen the elytra have the apex and a broad post-median fascia darker, but this is partly formed by the colour and arrangement of the pubescence.

9. **Mordella scutellaris.**

Mordella scutellaris, Fabr. Syst. Eleuth. ii. p. 123 [1]; Lec. Proc. Acad. Phil. xiv. p. 46 [2]; J. B. Smith, Trans. Am. Ent. Soc. x. pp. 80, 82, t. 1. figg. 34, 35 [3].

Mordella irrorata, Lec. Proc. Acad. Phil. xiv. p. 46 [4].

? *Mordella stimulea*, Mäkl. Act. Soc. Fenn. x. p. 569 [5].

Hab. North America, Canada [2 3], United States [2 3], Southern and Western States [4].—Mexico, Northern Sonora (*Morrison*), Pinos Altos in Chihuahua (*Buchan-Hepburn*), Chihuahua city, Acapulco, Oaxaca (*Höge*), Ciudad in Durango (*Forrer*), Xucumanatlan, Chilpancingo, Atoyac (*H. H. Smith*), Yolos, Playa Vicente, Cordova (*Sallé*); Guatemala (*Sallé*), Coban (*Conradt*), Calderas, Capetillo, San Gerónimo (*Champion*); Nicaragua, Chontales (*Belt*, *Janson*); Costa Rica, San Francisco (*Rogers*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).—South America [1], Brazil [5].

The typical form of this species is black without conspicuous markings. *M. irrorata*, Lec., has single intermixed cinereous hairs on the elytra, and a few of the Chihuahua and Durango specimens exhibit this peculiarity. The longer pygidium, the longer and non-clavate antennæ, and the rounded median basal lobe of the thorax distinguish the species from *M. melæna*, Germ. The second joint of the maxillary palpi is unusually stout in both sexes. The outer lobe of the maxillæ is elongated, very much as in *M. aculeata*, Linn. It is perhaps doubtful if the specimens from the above-quoted localities really all belong to one species; but I am unable to distinguish more than one amongst those from Central America.

The identification with the Fabrician species is given on the authority of Leconte [2].

10. **Mordella signata.** (Tab. XI. figg. 26 ; 26 *a*, antenna ; 27, var.)

Elongate, broadly cuneiform, black ; the head cinereous-pubescent ; the prothorax with a broad black median vitta (extending to the apex but not to the base) and a very large rounded black spot on either side of this about the middle, for the rest cinereous- or yellowish-cinereous-pubescent ; the scutellum cinereo-pubescent ; the elytra with a rather broad angulated fascia at about one-third from the base, extending upwards and downwards along the suture and reaching the base, and an equally broad transverse lunate mark on the disc beyond the middle (these markings in one example coalescent at the suture with those on the opposite elytron, in the other narrowly separated) cinereous- or yellowish cinereous-pubescent, the pubescence on the rest of the surface black. Head canaliculate ; antennæ black, reddish towards the base, rather slender, joints 3 and 4 narrow, 5–11 broader, 5–10 moderately serrate, in the female a little shorter ; prothorax transverse, very little rounded at the sides when viewed from in front ; elytra moderately long, narrowing from the base, more rapidly so in the male, the sides almost straight, the disc flattened or depressed, the shoulders prominent ; beneath cinereous-pubescent, a broad sublateral band and the last three ventral segments (except laterally in front) black ; pygidium long and stout, not much compressed at the sides, bluntly rounded at the apex, a little shorter in the female.

Var. *α*. The pubescence on the head darker, fuscous behind, cinereous in front ; the light markings on the prothorax reduced to a line along the base and a sinuous transverse line towards the anterior margin ; the antemedian angulated fascia of the elytra broken up into spots and disconnected from the short sutural mark at the base, the lunate mark on the disc beyond the middle not reaching the suture (in one specimen broad, in two others much reduced in size) ; the pubescence of the under surface in great part black. (Fig. 27.)

Var. *β*. Above and beneath black, the head with a little cinereous pubescence in front.

Length to end of the elytra $8\frac{1}{2}$–10, to tip of the pygidium 12–$13\frac{1}{2}$, millim. ; breadth $3\frac{3}{4}$–$4\frac{1}{3}$ millim. (♂ ♀.)

Hab. Mexico (*Sturm, in coll. Sallé*), Cerro de Plumas (*Höge*), Santecomapan (*Sallé*) ; Nicaragua, Chontales (*Belt, Janson*).

Seven examples. The description is taken from two well-marked specimens, one from Chontales and one from Cerro de Plumas ; of the var. *α* there are three specimens, two from Mexico (labelled *M. signata*, Sturm, in Sallé's collection) and one from Chontales ; of the var. *β*, two specimens from Santecomapan. This species is fully as large as *M. picta*, from which its distinctly shorter, broader, less compressed, obtuse pygidium, less prominent humeral callus, &c., distinguish it at once. The elytra are flattened or slightly depressed on the disc, and the shoulders prominent. In the male the hypopygium is nearly two-thirds, in the female about half the length of the pygidium, the latter being a little longer in the male than in the female.

11. **Mordella tripartita.** (Tab. XII. fig. 1.)

Elongate, broadly cuneiform, black ; the head cinereo-pubescent ; the prothorax with a broad black median vitta (not quite reaching the base or apex) and a large black patch on the disc on either side of it, for the rest cinereo-pubescent ; the scutellum cinereo-pubescent ; the elytra with three narrow fasciæ—one some distance below the base, one a little beyond the middle, and one before the apex, the anterior two partly interrupted,—and the suture very narrowly from the base to the anteapical fascia, cinereo-pubescent, the rest of the pubescence black ; the pygidium narrowly cinereo-pubescent at the base, for the rest black. Head somewhat deeply canaliculate ; antennæ (♂) moderately long, rather stout, joints 3 and 4 narrow, 5–11 broader, 5–10 subserrate, decreasing in length, 9 and 10 not much longer than broad ; elytra moderately long, rapidly narrowing from the base, flattened on the disc, with rather prominent shoulders, the sides straight ; beneath (and the lower side of the femora) cinereo-pubescent, a broad sublateral band and the last three ventral segments (except at the sides anteriorly) black ;

pygidium (♂) very stout, moderately long, truncate at the tip, one third longer than the hypopygium; legs black, the tibial spurs piceous, the anterior tibiæ almost straight, the four basal joints of the anterior and intermediate tarsi rather stout, densely pubescent beneath.

Length to end of the elytra $7\frac{1}{2}$, to the tip of the pygidium $9\frac{1}{2}$, millim.; breadth $3\frac{1}{3}$ millim. (♂.)

Hab. Mexico, Tehuantepec (*Sallé*).

One male example only. The trimaculate thorax, trifasciate elytra, stout and obtuse pygidium, and broad cuneiform shape chiefly distinguish *M. tripartita*. It is not very closely allied to any of the other species here described.

12. **Mordella arcuata.** (Tab. XII. fig. 2.)

Elongate, broadly cuneiform, rather convex, black; the head in part, the sides of the prothorax indeterminately, the scutellum, a transverse fascia (sometimes reduced to a spot on either side of the suture) a little below the base of the elytra—extending upwards along the suture to the base and usually connected with a short oblique humeral stripe so as to enclose a large spot at the base of each elytron,—and another fascia a little beyond the middle (widening inwardly and nearly or quite reaching the suture, its anterior and posterior edges concave) fusco- or olivaceo-cinereous-pubescent, the rest of the pubescence black or brownish-black. Palpi obscure testaceous or reddish, the last joint of the maxillary pair darker, stout, elongate-triangular, its apical and outer sides about equal in length, each very much shorter than the inner side; antennæ piceous with the basal joints reddish, rather slender, joints 3 and 4 equal in length, 4 a little stouter than 3, 5–11 moderately widened, equal in width, 5–10 serrate, decreasing gradually in length, longer than broad (10 nearly as broad as long), 11 much longer than 10; scutellum triangular; elytra moderately long, rapidly narrowing from the base, distinctly depressed along either side of the suture; beneath with a little fusco-cinereous pubescence at the base of the first ventral segment laterally and at the sides of the metasternum, for the rest brownish-black-pubescent; pygidium broad and stout (forming almost a continuous line with the sides of the elytra), moderately long, truncate at the tip, scarcely shorter in the female, not more than one half longer than the hypopygium, the latter comparatively elongate; legs stout, black, the anterior femora reddish at the base, the tibial spurs piceous.

Length to end of the elytra $5\frac{1}{2}$–$6\frac{1}{2}$, to tip of the pygidium 7–8, millim.; breadth $2\frac{1}{3}$–3 millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*), Oaxaca (*Höge*); Guatemala, Yzabal (*Sallé*).

Five examples. Perhaps nearest allied to *M. tripartita*, but with much more slender antennæ, the light pubescence very differently arranged and brownish or olivaceo-cinereous in colour, and the elytra more convex and distinctly depressed along either side of the suture. The pygidium is very stout, forming almost a continuous outline with the sides of the elytra, and truncate at the tip. The specimens in the Sallé collection are separated into three species, one of them bearing the MS. name of *M. arcuata*, Chevr. The post-basal fascia of the elytra is sometimes reduced to a spot on either side of the suture, so that it becomes disconnected from the short oblique humeral stripe.

13. **Mordella sellata.** (Tab. XII. fig. 3.)

Elongate, rather narrow, black; the head densely cinereo-pubescent; the prothorax with a broad black median vitta posteriorly (not extending to the base and reaching to a little beyond the middle in front) and a black triangular spot on either side of it, for the rest densely cinereo-pubescent; the scutellum cinereo-pubescent; the elytra with a common transverse rhomboidal mark a little below the base, a

large humeral patch, a broad median fascia (divided at the suture by a very narrow line of cinereous pubescence), and the apex, rather broadly, black, for the rest densely cinereo-pubescent; the pygidium cinereo-pubescent at the base, for the rest black. Last joint of the maxillary palpi moderately stout, triangular, its inner side shorter than the outer or apical sides; antennæ black with the four basal joints testaceous, joints 3 and 4 slender, 5–11 moderately dilated and serrate, 5 triangular, twice as broad as 4, 9 and 10 transverse; elytra moderately long; beneath cinereo-pubescent, the ventral segments marked with black at the sides, the last three with the apices also black; pygidium moderately long, rather stout, truncate at the tip, about twice as long as the hypopygium; legs, including the tibial spurs, black.

Length to end of the elytra $4\frac{1}{2}$, to tip of the pygidium $5\frac{1}{2}$, millim.; breadth $1\frac{3}{4}$ millim.

Hab. Mexico, Tehuantepec (*Sallé*).

One example. In the markings of the upper surface this insect differs considerably from all the other *Mordellæ* here described. It is, however, closely allied to several of the following species. The light pubescence is of an ashy-white colour.

14. **Mordella albopicta.**

Elongate, narrow, black; the head cinereo-pubescent; the prothorax (apparently) with a broad median black vitta (not reaching the base or apex and widened behind) and a large black spot on either side of it at the middle, for the rest cinereo-pubescent; the scutellum cinereo-pubescent; the elytra with the suture at the base, a short curved stripe on the disc in front (widened behind so as to partly enclose a black spot and in one specimen extending narrowly along the base to the suture), a short oblique stripe or two spots below this externally, an oblong spot close to the suture before the middle (connected in one specimen with the sutural mark at the base), and a rather narrow fascia at one-third from the apex (not reaching the suture or lateral margin and deeply excised on its anterior edge) cinereo-pubescent, the rest of the pubescence black; the pygidium cinereo-pubescent at the base, black beyond. Last joint of the maxillary palpi as in *M. sellata*; antennæ piceous with the basal four joints fusco-testaceous, short, joints 3 and 4 slender, 5–11 moderately dilated, subserrate, 5 triangular, twice as broad as 4, 6–8 about as broad as long, 9 and 10 transverse; elytra moderately long; beneath cinereo-pubescent, the sides in part black; pygidium rather short, moderately stout, blunt at the tip, about twice as long as the hypopygium; legs, including the tibial spurs, black, the anterior and intermediate femora and tibiæ fusco-testaceous in one specimen (♂).

Length to end of the elytra 4, to tip of the pygidium $4\frac{1}{2}$, millim.; breadth $1\frac{1}{2}$ millim. (♂.)

Hab. Mexico, Cordova (*Sallé*).

Two worn specimens only, one of which is a male. Allied to *M. sellata*, but with very different cinereo-pubescent markings. The light pubescence is almost white in one example. Labelled *M. albopicta*, Chevr., in the Sallé collection.

15. **Mordella tetraspilota.** (Tab. XII. fig. 4.)

Elongate, rather narrow, the female broader, black; the head cinereous- or brownish-pubescent; the prothorax with three broad black or blackish-brown vittæ (the median one widened behind, the lateral ones oblique, the median sometimes divided before the middle by a fine transverse line of cinereous pubescence), the rest of the pubescence cinereous; the scutellum cinereo-pubescent; the elytra each with an elongate oblique spot on the middle of the disc a little below the base, and a subquadrate transverse spot (not reaching the suture or lateral margin, and sometimes excised on its anterior or posterior edge) on the disc beyond the middle whitish- or cinereo-pubescent, the rest of the pubescence blackish-brown; the pygidium cinereo-pubescent at the base laterally, for the rest black. Last joint of the maxillary palpi moderately stout, triangular, the inner side much shorter than either the outer or apical sides; antennæ black, the basal three or four joints testaceous, joints 3 and 4 slender, 5–11

subserrate, much longer than broad, moderately dilated, 5–8 a little more distinctly serrate; elytra moderately long; beneath cinereo-pubescent, the ventral segments black at the apex; pygidium short and stout, blunt at the tip, not twice the length of the hypopygium in either sex, a little shorter in the female; legs, including the tibial spurs, black.

Var. The prothorax with a median basal patch and the sides in front alone cinereous; the elytra with a little additional cinereous pubescence at the extreme apex.

Length to end of the elytra $3\frac{3}{4}$–$4\frac{1}{2}$, to tip of the pygidium $4\frac{2}{3}$–$5\frac{1}{3}$, millim.; breadth $1\frac{1}{2}$–$1\frac{3}{4}$ millim. (♂ ♀.)

Hab. Mexico, Iguala in Guerrero (*Höge*), Chilpancingo (*H. H. Smith*), Capulalpam (*Sallé*).

Five examples, four of the type and one of the variety. Allied to *M. albopicta* and *M. sellata*, but with the pygidium still shorter. The elytra have merely a whitish-pubescent oblique mark before and a transverse spot on the disc beyond the middle; in the variety the apices are also whitish-pubescent. The species is apparently confined to Western Mexico. The variety is from Capulalpam.

16. **Mordella leucosticta.** (Tab. XII. fig. 5.)

Elongate, rather narrow, black; the head cinereo-pubescent; the prothorax with indications of a broad black median vitta and a large black spot in the middle on either side of it, for the rest cinereo-pubescent; the scutellum cinereo-pubescent; the elytra each with an oblique stripe extending from the shoulder downwards towards the suture (widened behind into a triangular mark and about reaching to the basal third of the elytron, but not nearly extending to the suture) and a narrow fascia a little beyond the middle (not reaching the suture or lateral margin and more or less excised in front and behind) cinereo-pubescent, the rest of the pubescence black; the pygidium cinereo-pubescent at the sides in front, for the rest black. Last joint of the maxillary palpi stout in both sexes, triangular, broader in the male; antennæ black with the basal three or four joints testaceous, rather long, joints 3 and 4 slender, 4 much longer than 3, 5–11 moderately widened, much longer than broad, 5 triangular, fully twice as broad as 4, 5–7 in the male a little more distinctly serrate; elytra moderately long; beneath with the pubescence in great part black, the sides of the ventral segments in front and the metasternum cinereo-pubescent; pygidium rather slender, long and acuminate, about twice the length of the hypopygium; legs black, the anterior femora in some examples fusco-testaceous, the tibial spurs pale testaceous.

Length to end of the elytra $2\frac{2}{3}$–4, to tip of the pygidium $3\frac{1}{2}$–$5\frac{1}{3}$, millim.; breadth $1\frac{1}{4}$–$1\frac{3}{4}$ millim. (♂ ♀.)

Hab. Guatemala, San Isidro (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba, Tolé (*Champion*).

Six examples. These vary greatly in size, but the elytral markings are constant. The longer and more slender pygidium and the testaceous tibial spurs distinguish *M. leucosticta* from *M. albopicta*, *M. tetraspilota*, &c. This is one of several closely allied Central-American species.

17. **Mordella astuta.**

Short and narrow, black; the head, the entire base of the prothorax narrowly, and the elytra with the suture very narrowly from the base to a little beyond the middle and an ill-defined obliquely placed **V**-shaped mark at the base laterally cinereous- or brownish-cinereous-pubescent, the rest of the pubescence black. Palpi pitchy-brown, the last joint of the maxillary pair darker, the latter triangular, its apical and inner sides about equal in length; antennæ piceous or black, the basal joints paler, joints 3 and 4 slender, subequal, 5–11 moderately widened, 5–10 serrate, gradually decreasing in length, 9 and 10

rather broader than long, 11 short ovate, very little longer than 10; elytra rather short; beneath with the metasternum, the sides of the posterior coxæ in front, and the base of each ventral segment cinereo-pubescent, for the rest blackish-pubescent; pygidium long, about twice the length of the hypopygium; legs black, the tibial spurs piceous.

Length to end of the elytra $2\frac{2}{3}$, to tip of the pygidium $3\frac{1}{3}$, millim.; breadth 1 millim.

Hab. Mexico, Teapa (*H. H. Smith*); Guatemala, Cahabon in Vera Paz (*Champion*).

Four examples of this very obscure little species have been obtained. It is perhaps nearest allied to *M. dimidiata*, from which it differs not only in colour but in the longer antennæ and pygidium. The light-coloured pubescence on the elytra is limited to an obliquely placed **V**-shaped mark below the shoulder and a narrow line along the basal half of the suture.

18. **Mordella fluctuosa.** (Tab. XII. fig. 6.)

Moderately elongate, rather broad, black; the head cinereo-pubescent; the prothorax with the apex narrowly, a narrow angulated line in front extending completely across (with the marginal line almost enclosing three transverse black marks), and a rather large triangular patch at the base on either side of the middle (extending forwards but not reaching the centre, and also laterally to the posterior angles) cinereo-pubescent, for the rest black; the scutellum cinereo-pubescent; the elytra with two narrow strongly angulated cinereo-pubescent fasciæ—one some distance before and the other beyond the middle, the former not reaching the suture and with a short narrow branch laterally extending upwards to the base, the latter extending completely across and with the portion on the opposite elytron forming a **W**-shaped mark,—the suture very narrowly at the extreme base and the apical third with a little scattered cinereous pubescence, the rest of the pubescence black; the pygidium cinereo-pubescent at the base, black beyond. Palpi piceous, the last joint of the maxillary pair stout, triangular; antennæ piceous with the basal four joints paler, short and slender, joints 3 and 4 very thin, long, and equal, 5–11 wider, 5 triangular, longer than 4, 6–10 serrate, decreasing in length, the penultimate joints transverse; elytra not quite two and a half times the length of the prothorax; beneath in great part cinereo-pubescent; pygidium slender, pointed at the tip, moderately long, more than twice the length of the hypopygium; legs black, the tibial spurs piceo-testaceous, the anterior tibiæ curved.

Length to end of the elytra 3, to tip of the pygidium $3\frac{3}{4}$, millim.; breadth $1\frac{1}{3}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

One example, probably of the male sex. Of the size and general appearance of *M. acuticauda*, but with very different cinereo-pubescent markings on the thorax and elytra, short serrate antennæ, &c. *M. fluctuosa* is perhaps nearest to *M. albopicta*, but it is less elongate and much smaller; the antennæ and pygidium are much more slender, the elytral markings very different.

19. **Mordella acuticauda.** (Tab. XII. fig. 7.)

Moderately elongate, the female broader, black, somewhat sparsely pubescent; the head cinereo-pubescent; the prothorax with the sides and base and a line along the disc on either side of the middle (not reaching the apex) cinereo-pubescent, for the rest black; the scutellum cinereo-pubescent; the elytra with three rather narrow cinereo-pubescent fasciæ—one at about one fourth from the base, curving forwards at the sides and extending to the shoulders, one at the middle, angulated or a little excised on its upper or lower edge, and one some little distance before the apex, the latter curving upwards and confluent with the opposite one at the suture, the anterior two nearly reaching the suture,—for the rest black; the pygidium cinereo-pubescent at the base, black beyond. Head very broad and convex, without distinct

median groove; palpi testaceous, the last joint of the maxillary pair sometimes darker, the latter broad and subequilaterally triangular in the male, smaller and with the apical side shorter than the inner or outer sides in the female; labrum testaceous; antennæ piceous or dark brown with the basal four or five joints testaceous, slender, joints 3 and 4 very thin, 4 a little longer than 3, 5–11 wider and very feebly serrate, 11 longer and distinctly stouter than 10; elytra moderately long; beneath with a good deal of silvery or whitish pubescence; pygidium long and pointed, compressed laterally, very slender, nearly three times the length of the hypopygium, only a little shorter in the female; legs black, the anterior pair (the tips of the tarsi excepted) and the posterior tibial spurs testaceous, the intermediate pair often piceo-testaceous, the latter and the anterior pair very slender but with their penultimate tarsal joint very distinctly dilated.

Length to end of the elytra $2\frac{2}{3}$–3, to tip of the pygidium $3\frac{1}{2}$–4, millim.; breadth $1\frac{1}{8}$–$1\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*); Guatemala, Senahu, Cachil, and San Gerónimo in Vera Paz (*Champion*); Panama, Bugaba (*Champion*).

Numerous examples. The pubescence of the upper surface is rather scanty, and the ashy- or obscure ashy-pubescent markings are less sharply defined than usual owing to the dark ground-colour showing through. The markings of the elytra are placed somewhat as in the North-American *M. triloba*, Say (figured by J. B. Smith, in Trans. Am. Ent. Soc. x. t. 2. fig. 6); but the basal fascia encloses one spot only (instead of two) on each elytron. The pygidium is very slender, long, and pointed, and by this character alone *M. acuticauda* may be separated from all the allied species, the following excepted.

20. **Mordella analis.**

Closely allied to *M. acuticauda*, and only differing as follows:—Smaller; the median fascia of the elytra broader and straighter, the posterior fascia completely obliterated; the last two or three ventral segments testaceous or fusco-testaceous; the pygidium much shorter, not more than twice the length of the hypopygium.

Length to end of the elytra $2\frac{1}{4}$–$2\frac{1}{2}$, to tip of the pygidium $2\frac{2}{3}$–3, millim.

Hab. Panama, Bugaba, Tolé (*Champion*).

Two imperfect examples. Perhaps only a variety of *M. acuticauda*, but in our series of the latter there is nothing intermediate. *M. analis* resembles *M. cingulata* in its markings, but differs totally from that insect in the form of the antennæ, the slender and short pygidium, and the slender legs.

21. **Mordella octolineata.** (Tab. XII. fig. 8.)

Comparatively short, black; the head, prothorax, and scutellum densely clothed with yellowish-cinereous pubescence, that on the prothorax intermixed with brown hairs which in certain lights assume the appearance of four narrow longitudinal stripes; the elytra black, sometimes with an oblique reddish or fulvo-testaceous spot below the shoulders, each with four narrow, parallel, more or less distinct, oblique stripes of yellowish-cinereous pubescence extending from the base downwards—two of them extending to the apex and two of them becoming evanescent at about one-third from the apex,—the rest of the surface clothed with brownish-black pubescence; the pygidium blackish-pubescent, cinereous at the base only. Head almost smooth when denuded of pubescence; palpi testaceous, the last joint of the maxillary pair a little darker at the tip, the latter elongate-triangular, rather narrow, its inner side longer than the

apical side, each much shorter than the outer side; antennæ obscure testaceous, piceous towards the tip, joints 3 and 4 short, subequal, 5–11 moderately widened, 5–10 serrate, decreasing in length, 5 rather longer than broad, 6–10 about equal in width, 9 and 10 strongly transverse, 11 short ovate, longer but a little narrower than 10; scutellum triangular; elytra comparatively short; beneath cinereo-pubescent, the ventral segments at the sides behind clothed with dark brown pubescence; pygidium short and rather stout, blunt at the tip, about twice the length of the hypopygium; legs stout, black, the anterior and intermediate femora and tibiæ testaceous or fusco-testaceous, the tibial spurs piceous.

Length to end of the elytra $3\frac{1}{4}$, to tip of the pygidium 4, millim.; breadth $1\frac{1}{3}$ millim.

Hab. Mexico, Jalapa (*Höge*); Guatemala, near the city, Capetillo (*Champion*).

Three examples only of this peculiar little species have been obtained. The arrangement of the elytral pubescence is different from that of all the other Central-American *Mordellæ*, each elytron having four narrow, parallel, slightly oblique, lines of light pubescence, and these lines separated by narrow stripes of blackish pubescence; the Guatemalan examples have a reddish spot below the humerus. *M. octolineata* has much the facies of a small *Tomoxia*, but the scutellum is triangular; the N. American *T. lineella*, Lec., seems to have somewhat similar markings.

22. **Mordella subdola.** (Tab. XII. fig. 9.)

Moderately elongate, black; the head, the prothorax on all sides indeterminately (and in one specimen the sides of the disc also), the scutellum, the elytra with the suture and base very narrowly and a very narrow oblique stripe extending from the shoulder to the middle, and the basal half of the pygidium, cinereo-pubescent, the rest of the pubescence of the upper surface black. Palpi piceous, the last joint of the maxillary pair stout, subcultriform, its outer and apical sides about twice the length of the inner side; antennæ piceous, the basal four joints paler, joints 3 and 4 slender, subequal, 5–11 moderately widened, longer than broad, differing very little in length, 5–10 subserrate; elytra moderately long, flattened on the disc; beneath with the metasternum, the sides of the hind coxæ in front, and the base of each ventral segment cinereo-pubescent, for the rest blackish-pubescent; pygidium rather short, not very stout, blunt at the tip, twice the length of the hypopygium; legs black, the tibial spurs obscure testaceous.

Length to end of the elytra 4, to tip of the pygidium 5, millim.; breadth $1\frac{3}{4}$ millim.

Hab. Mexico, Juquila and Yolotepec, both in Oaxaca (*Sallé*).

One worn example only from each locality. Easily separable from most of the *Mordellæ* here described by the suture being narrowly cinereo-pubescent from the base to the apex; on each elytron there is also a very narrow oblique slightly interrupted line of cinereous pubescence extending from the shoulder to the middle. The antennæ are longer and less strongly serrate than in *M. astuta*, from which it also differs in the form of the last joint of the maxillary palpi.

Perhaps a variety of the North-American *M. obliqua*, Lec. (Proc. Am. Phil. Soc. xvii. p. 428, fig.), from the figure of which it only seems to differ in having a shorter and more oblique discoidal stripe on the elytra. *M. obliqua* is treated by J. B. Smith in his 'Monograph' as a variety of *M. lunulata*, Helm.; the type of *M. obliqua* is also figured by him (Trans. Am. Ent. Soc. x. t. 2. fig. 1).

23. **Mordella chevrolati.** (Tab. XII. figg. 10, ♂; 10 *a*, antenna, ♂.)

Comparatively short, black, the punctuation of the upper surface very dense and granular; the head with a large broad-ovate brown-pubescent patch in the middle (extending to the base and apex), the sides with silvery-white pubescence; the prothorax with the sides and a triangular mark on either side of the middle at the base silvery-white-pubescent, the pubescence between and just in front of these marks brownish-black, for the rest golden- or fulvous-brown; the scutellum with blackish-brown pubescence; the elytra brown-pubescent, each with a very large oblong patch of black or blackish-brown pubescence on the disc extending from the base to the middle (not reaching the suture or lateral margin and narrowing behind) and enclosing two oblong, slightly oblique, silvery-white-pubescent spots; the pygidium silvery- or cinereo-pubescent, with a line of brown pubescence along the middle. Palpi obscure testaceous, the last joint of the maxillary pair broadly triangular in both sexes; antennæ pitchy-brown with the basal joints testaceous, long and slender in both sexes, joints 3 and 4 thin, subequal, 5–11 broader but very little widened, much longer than broad, 5–10 decreasing in length, only feebly subserrate, 11 in the male considerably more than, in the female nearly, twice as long as 10; elytra rather short; beneath silvery-white-pubescent, the pubescence on the inner portion of the posterior coxæ blackish-brown; pygidium rather short in both sexes, blunt at the tip, a little more than twice the length of the hypopygium; legs black, the anterior femora and tibiæ, the intermediate femora, and the tibial spurs testaceous, the inner posterior tibial spur very long.

Length to end of the elytra $3\frac{1}{2}$–$3\frac{2}{3}$, to tip of the pygidium $3\frac{3}{4}$–$4\frac{1}{3}$, millim.; breadth $1\frac{2}{3}$ millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*); Guatemala, Yzabal (*Sallé*), Teleman and San Juan in Vera Paz (*Champion*).

Four specimens, all from the Atlantic slope of Southern Mexico or Guatemala. This handsome species differs from all other *Mordellæ* known to me in having the apical joint of the antennæ more than twice the length of the tenth in the male, the antennæ themselves being very slender. The two oblong silvery-pubescent spots on each elytron and the triangular basal mark on the thorax are placed in an oblique line and are almost equidistant from each other; these spots being surrounded by blackish pubescence are very conspicuous. Labelled with the preoccupied name of *M. alboguttata*, Chevr., in the Sallé collection.

24. **Mordella sexnotata.** (Tab. XII. fig. 11.)

Comparatively short, black, very densely and somewhat roughly punctured; the head broadly brown-pubescent along the middle, the sides with silvery-white pubescence; the prothorax with a line along either side of the middle extending for two-thirds of its length, widening behind and forming an elongate-triangular mark, the basal margin very narrowly, and the sides silvery-white-pubescent, for the rest clothed with blackish pubescence (this being nearly separated into three broad vittæ by the white pubescence, and becoming browner in front); the scutellum blackish-pubescent; the elytra with more than the apical half brown-pubescent, each with a very large blackish basal patch (extending laterally almost to the middle and reaching the suture at the base, but cut off obliquely behind from a little below the base), this patch almost enclosing three triangularly-placed silvery-white-pubescent spots—one, almost rounded, near the base, one, in the form of a short oblique stripe, below the shoulder, one, triangular, on the disc, below and more distant from the suture than the basal one,—the shoulders with a little brown pubescence; the pygidium silvery-pubescent, with a line of brown pubescence along the middle. Head, eyes, and palpi as in *M. chevrolati*, the antennæ formed as in the female of that species, but a little more slender; beneath silvery-white-pubescent; pygidium and legs much as in *M. chevrolati*, the latter a little more slender.

Length to end of the elytra $2\frac{1}{2}$, to tip of the pygidium 3, millim.; breadth 1 millim.

Hab. Panama, Bugaba (*Champion*).

One example, which, from the form of the apical joint of the antennæ, is probably of the female sex. Perhaps a small varietal form of *M. chevrolati*, but differing from our four examples of that species in the markings of the thorax and elytra: the triangular silvery patch on either side of the middle of the thorax at the base is continued forwards to beyond the middle, so as to partly divide the blackish pubescence into three vittæ, this pubescence being very much darker than it is in *M. chevrolati*; the elytra have an additional silvery spot under the shoulder, the two other spots are less elongate and more obliquely placed, and the blackish pubescence on the basal half extends to the lateral margin.

25. **Mordella dimidiata.** (Tab. XII. fig. 12.)

Moderately elongate, black, the prothorax usually entirely rufous—sometimes with the base very narrowly or the basal half, sometimes entirely, piceous; the head cinereo-pubescent; the prothorax bordered with cinereous pubescence at the base, the pubescence of the rest of the surface partaking of the ground-colour or brown in dark-coloured specimens; the scutellum brownish- or cinereo-pubescent; the elytra with a little more than the apical half uniformly brown-pubescent, a line of cinereous or brownish-cinereous pubescence extending upwards along the suture to the base and continued along it to meet a longitudinal line of pubescence running from the base downwards on the outer portion of the disc, this latter not reaching the brown pubescence but abruptly ending and with an oblique branch running upwards from its point of termination to a little below the shoulder, the rest of the pubescence on the basal portion black; the pygidium cinereo- or fusco-pubescent. Last joint of the maxillary palpi piceous, not very broad, subtriangular, its outer side much longer than the inner or apical sides; antennæ black with the basal joints obscure testaceous, short, joints 3 and 4 narrow, subequal, 5–11 wider and moderately dilated, 5–10 serrate, decreasing in length, 8–10 transverse; elytra moderately long, shorter in some specimens; beneath in great part cinereo-pubescent, the ventral segments (except in the middle) black along their posterior half; pygidium rather slender, moderately long, shorter in the female, blunt at the tip, in the male more than twice the length of the hypopygium; legs black, the tibial spurs piceous, the anterior coxæ and femora usually paler in colour, the posterior tibial spurs comparatively short.

Length to end of the elytra $2\frac{1}{2}$–4, to tip of the pygidium 3–$5\frac{1}{4}$, millim.; breadth $1\frac{1}{8}$–$1\frac{2}{3}$ millim. (♂ ♀.)

Hab. Mexico, Jalapa, Cerro de Plumas (*Höge*), Teapa in Tabasco (*H. H. Smith*); Guatemala, Cahabon (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Volcan de Chiriqui, Caldera, San Lorenzo (*Champion*).

Widely distributed but apparently scarce, one or two examples only having been found at each locality. This species differs from all the other Central-American *Mordellæ* in the arrangement and colour of the pubescent markings on the elytra. The thorax is usually rufous, rarely piceous, this difference in colour not being sexual. The antennæ are short, serrate from the fifth joint, and rather slender. The last joint of the maxillary palpi is subtriangular and only moderately stout. The lines of light pubescence on the basal half of the elytra are of a more ashy colour than the pubescence on the posterior half, the latter being brown; the pubescence on the rest of the anterior portion is black. The insect varies greatly in size.

26. **Mordella rufomaculata.** (Tab. XII. fig. 13.)

Rather short, black; the head broadly brown-pubescent along the middle, the sides with silvery-white pubescence; the prothorax with a broad median vitta, narrowing before and behind and extending completely across, and a large transverse triangular spot on either side of it behind the middle blackish-pubescent, the rest of the pubescence silvery-white; the scutellum with white pubescence; the elytra with a sparsely pubescent broad fulvo-rufous lateral patch occupying the basal third, a silvery-white-pubescent stripe extending from the base downwards (a little distant from the suture) and nearly meeting a transverse similarly coloured median fascia (the latter not reaching the suture), the median fascia preceded and followed and the discal stripe rather broadly bordered within with blackish pubescence, the apical third brown-pubescent, a narrow line of similarly coloured pubescence extending up the suture nearly to the base, the extreme apex and the scutellar region also with a little white pubescence; the pygidium silvery-white-pubescent, with a narrow line of brown pubescence along the middle. Palpi testaceous, the last joint of the maxillary pair broadly triangular, its inner and outer sides subequal and each shorter than the inner side; antennæ pitchy-brown with the basal four joints testaceous, slender and rather short, joints 3 and 4 thin, subequal, 5–11 broader but very little widened, 5–10 decreasing in length and subserrate, 10 about as broad as long, 11 nearly twice as long as 10; elytra less than two and a half times the length of the prothorax; beneath densely silvery-white-pubescent, the posterior coxæ behind and the first ventral segment at the apex laterally brown; pygidium moderately long and acuminate, more than twice the length of the hypopygium; legs black, the anterior pair (the tarsi excepted) testaceous, the intermediate femora and tibiæ brownish, the tibial spurs testaceous.

Length to end of the elytra $3\frac{1}{2}$, to tip of the pygidium 4, millim.; breadth $1\frac{1}{2}$ millim.

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*).

Allied to *M. chevrolati* and *M. sexnotata*, but with a very different arrangement of the pubescence, and the sides of the elytra broadly fulvo-rufous at the base; the antennæ are also much shorter. As in the two species mentioned, the silvery-white pubescent spots on the elytra are almost surrounded by dark pubescence, and are very conspicuous.

27. **Mordella crassipes.** (Tab. XII. fig. 14.)

Moderately elongate, rather broad, black; the head, the prothorax in part, and the scutellum yellowish-cinereous-pubescent, the prothorax with an irregular very broad blackish-brown-pubescent patch on the disc (occupying the greater part of its width and interrupted behind on either side of the middle by a short longitudinal extension of the light pubescence); the elytra with a broad oblique fulvous stripe extending from the shoulders to beyond the basal third and curved inwards anteriorly, this stripe, the suture rather broadly from the base to a narrow angulated fascia at one-fourth from the apex, and the extreme base densely yellowish-cinereous-pubescent, for the rest clothed with black pubescence; the pygidium yellowish-cinereous-pubescent in its basal half, black beyond. Head distinctly canaliculate behind; palpi pitchy-brown, the last joint of the maxillary pair elongate-triangular, its outer side not much longer than the apical side, each very much longer than the inner side; antennæ black, the five basal joints obscure red, joints 3 and 4 short, 4 subtriangular, a little wider than 3, 5–11 moderately widened, 5–10 not thickening outwardly, about as broad as long, gradually becoming more strongly serrate, 8–10 very strongly so, 11 a little longer but not narrower than 10; elytra moderately long; beneath black, cinereo-pubescent, the ventral segments with a good deal of dark brown pubescence at the sides behind; pygidium stout, rather short, blunt at the tip, about twice the length of the hypopygium; legs short and stout, black, the posterior tibial spurs fusco-testaceous, the latter comparatively short.

Length to end of the elytra 4, to tip of the pygidium 5, millim.; breadth $1\frac{2}{3}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

One example only. The much shorter, stouter, and blacker legs, the differently

formed antennæ, the arrangement of the elytral pubescence, &c., distinguish this species at once from the Mexican *M. triangulifer*, which it perhaps most nearly resembles. The antennal joints 5–11 are about equal in width, 3 and 4 comparatively stout. The oblique humeral pubescent stripe partly partakes of the ground-colour from which it arises, the rest of the surface beneath the pubescence being black.

28. **Mordella rufovittata.** (Tab. XII. fig. 15.)

Elongate, black, sparsely pubescent, the prothorax reddish at the sides behind, the elytra with a broad reddish stripe at the sides extending to considerably beyond the middle and reaching the lateral margin in front; on the elytra traces of a yellowish-pubescent common anteapical fascia and a line of similarly coloured pubescence extending up from it to the base are visible, the apical portion before and beyond the fascia being blackish-pubescent (the remainder of the pubescence is abraded). Antennæ testaceous, long and thin, subfiliform, joints 3 and 4 very slender, 4 much longer than 3, 5–10 (11 is broken off) only a little wider, all more than twice as long as broad; beneath black, the last two ventral segments reddish-testaceous; pygidium reddish-testaceous, the apical half a little darker, slender and moderately long, nearly three times the length of the hypopygium; legs long and slender (the hind pair excepted), testaceous, the posterior femora and tibiæ piceous, the inner posterior tibial spur exceedingly elongate.

Length to end of the elytra $3\frac{1}{3}$, to tip of the pygidium 4, millim.; breadth $1\frac{1}{2}$ millim.

Hab. Mexico, Cordova (*Sallé*).

Though only a single abraded, broken, specimen has been received, it is advisable to name it, the insect differing from all the other Central-American *Mordellæ*, *M. flavifrons* excepted, in the form of the antennæ. The species is perhaps nearest allied to *M. badiipennis*, from which its much more elongate shape, longer legs, and very different colour distinguish it.

29. **Mordella badiipennis.** (Tab. XII. fig. 16.)

Elongate, sparsely pubescent, black, the mouth-parts (the tips of the mandibles excepted) testaceous, the prothorax at the sides behind and at the base laterally reddish-brown, the elytra light reddish-brown, their apical half indeterminately darker; the head and the prothorax at the sides in front cinereo-pubescent, the remainder of the pubescence on the latter partaking of the ground-colour; the elytra each with a faint oblique yellowish-cinereous-pubescent stripe on the basal third extending from the shoulders to the suture and a broader and more distinct similarly pubescent oblique stripe on the apical half extending from the middle of the disc to the apex, the rest of the pubescence darker; the pygidium cinereo-pubescent at the base, blackish beyond. Palpi testaceous, the last joint of the maxillary pair stout, subtriangular; antennæ pitchy-testaceous with the basal four joints paler, slender, joints 3 and 4 thin, subequal, 5–11 broader but very little widened, 5–10 feebly subserrate, gradually decreasing in length, all longer than broad (8–10 subequal), 11 stouter and a little longer than 10; elytra moderately long; beneath silvery-white-pubescent, black, the last ventral segments obscure testaceous; pygidium very long and slender, compressed laterally, pointed at the tip, more than three times the length of the hypopygium; legs long and comparatively very slender, in great part testaceous, the tips of the four anterior tibiæ and of all the tarsal joints and the posterior femora and the greater part of the posterior tibiæ piceous.

Length to end of the elytra 3, to tip of the pygidium $4\frac{1}{4}$, millim.; breadth $1\frac{1}{3}$ millim.

Hab. Guatemala, Chacoj in the Polochic valley (*Champion*).

One specimen only, probably of the male sex. Allied to *M. acuticauda*, but differing from it by the longer and more slender legs, which are in great part testaceous, the

reddish-brown elytra and sides of the thorax, the sparser pubescence, &c. The elytra have a distinct broad oblique stripe of paler pubescence on the posterior half and a faint oblique line of paler pubescence running from the shoulders downwards. The pygidium is very long and slender, pointed at the tip. The intermediate tibiæ are sinuously curved inwards. The punctuation of the upper surface is very fine and shallow.

30. **Mordella flavolineata.** (Tab. XII. fig. 17.)

Moderately elongate, rather broad, black, the humeri obscure castaneous, the pygidium reddish; the head with a line of bright golden pubescence on either side (not extending behind the eyes), for the rest brownish-black-pubescent; the prothorax with an oblique stripe of bright golden pubescence on either side of the middle of the disc extending from the apex nearly to the base, and a little golden pubescence at the base near the hind angles, for the rest blackish-pubescent; the scutellum blackish-pubescent; the elytra each with a narrow interrupted slightly oblique fascia towards the sides just below the base, a narrow transverse fascia some little distance beyond the middle (not reaching the suture), and the apex narrowly bright golden-pubescent, for the rest clothed with blackish pubescence; the pygidium golden-pubescent to about the middle, darker beyond. Head obsoletely canaliculate; palpi and oral organs testaceous, the last joint of the maxillary palpi elongate-ovate, narrow; antennæ entirely flavo-testaceous, very long, joints 3 and 4 very slender, elongate, subequal, 5–11 moderately dilated, equal in width, all very much longer than broad, 5–10 slightly decreasing in length, serrate, 11 elongate-ovate, scarcely longer than 10; elytra moderately long; beneath black, the last two ventral segments reddish, the latter and a small spot on the sides of the first ventral segment in front bright golden-pubescent, for the rest clothed with brownish-black pubescence; pygidium rather slender, comparatively short, twice the length of the hypopygium; legs slender (the hind pair excepted), the two anterior pairs and the posterior tibial spurs testaceous, the hind pair piceous but with the tarsi in great part reddish, the third and fourth joints of the anterior and middle tarsi very feebly widened.

Var. The lines of pubescence on the head and prothorax white, those on the latter extending to the base, the sides of the prothorax also with some whitish pubescence; the pubescence on the scutellum and at the base of the first ventral segment white; the postmedian fascia of the elytra placed nearer the apex, a little curved, and almost extending to the suture, the golden pubescence at the apex quite obsolete.

Length to end of the elytra $4\frac{1}{2}$–$4\frac{3}{4}$, to tip of the pygidium 5–$5\frac{1}{3}$, millim.; breadth 2 millim.

Hab. Mexico (*Sallé*); Guatemala, Senahu (*Champion*).

One example only from each locality, probably male and female; the Guatemalan one is taken as the type. In the variety the lines of pubescence on the head and thorax are white instead of golden-yellow, the markings on the elytra being of this colour in both forms. The species is not at all closely allied to any of the other Central-American *Mordellæ*. In the form of the antennæ it approaches *M. pretiosa*, but it has shorter legs and a more slender pygidium; the antennæ are entirely flavo-testaceous, long, and have their third and fourth joints very slender; the penultimate joints of the anterior and middle tarsi are very slightly dilated, these joints being narrow and filiform in *M. pretiosa*. The typical example is figured.

31. **Mordella flavofasciata.** (Tab. XII. fig. 18.)

Moderately elongate, narrow, black, the mouth-parts (the tips of the mandibles excepted) testaceous; the head, prothorax, and pygidium sparsely clothed with yellowish-cinereous pubescence; the elytra with a broad fulvous-yellow transverse fascia a little below the base and a similarly coloured fascia beyond the middle

(the former not nearly, the latter almost or quite, reaching the suture, the posterior one usually widening inwardly and with its upper and lower edges concave, the anterior one sometimes extending upwards to the shoulder), these markings golden-pubescent, the rest of the surface with dense brownish- or purplish-black pubescence. Palpi pitchy-brown, the last joint of the maxillary pair subtriangular, moderately broad; antennæ slender, testaceous, the outer joints sometimes darker, joints 3 and 4 short, not much longer than broad, 4 subtriangular, slightly wider than 3, 5–11 broader than 4, longer than wide, 5–10 scarcely serrate, subequal, 11 a little longer but not wider than 10; elytra scarcely narrower at the base than the prothorax, moderately long; beneath black, the ventral segments cinereo-pubescent at the base, for the rest clothed with dark brownish pubescence; pygidium long and slender, considerably more than twice the length of the hypopygium in both sexes; legs piceous, the anterior and middle knees, tibiæ, and tarsi (except the tips), the hind tarsi in great part, and the base of the hind tibiæ and their spurs testaceous, the anterior and intermediate tibiæ slightly sinuous within in the male.

Length to end of the elytra 3–3⅔, to tip of the pygidium 4–4⅓, millim.; breadth 1¼–1⅓ millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*), Teapa in Tabasco (*H. H. Smith*); Guatemala, San Gerónimo, Capetillo (*Champion*).

Seven specimens. This species has, unlike most of the members of the genus, the pubescent markings of the elytra accompanied by a corresponding difference in the ground-colour, the pubescence in fact partaking of the colour of the surface from which it arises. The prothorax at the base is scarcely broader than the base of the elytra. The antennæ have their joints 5–11 so feebly subserrate as to be almost filiform. *M. flavofasciata* cannot be confounded with any of the other species of *Mordella* here described, but it seems to come near the Brazilian *M. fulvonotata*, *M. quadripustulata*, and *M. decorata*, Mäkl.

32. **Mordella flavonotata.** (Tab. XII. fig. 19.)

Moderately elongate, rather shining; the head testaceous, with a piceous patch in the middle (this patch in one specimen much extended, so that only the sides and front of the head remain testaceous), the eyes black; the prothorax flavo-testaceous, with a black median vitta extending from the base to the apex; the scutellum black; the elytra black, with two flavo-testaceous transverse fasciæ—one before and the other beyond the middle, the anterior one interrupted at the suture; the pygidium flavo-testaceous; the pubescence sparse and partaking of the ground-colour. Head regularly convex; palpi testaceous, the last joint of the maxillary pair rather narrow, its apical side very much shorter than the inner or outer sides; antennæ testaceous, slender, moderately long, joints 3 and 4 short, small, subequal, 5–11 a little widened, longer than broad, 5 and 7 the widest; elytra convex, rather short; beneath with the metasternum (except in the middle), the sides of the posterior coxæ in front, and the sides of the first three ventral segments black, for the rest flavo-testaceous; pygidium exceedingly long (more than half the length of the elytra), slender, and acuminate, more than twice the length of the hypopygium; legs flavo-testaceous, the extreme apex of the hind tibiæ and of each hind tarsal joint piceous, the hind tibial spurs very elongate.

Length to end of the elytra 2½, to tip of the pygidium 3⅓, millim.; breadth 1 millim.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

Two examples. Resembling *M. flavofasciata* in the elytral markings; but differing from it by the much longer pygidium, and by the head, thorax, and under surface being partly yellow. The upper surface is sparsely pubescent and rather shining. Evidently a close ally of the Brazilian *M. amœna*, Mäkl., but not altogether agreeing with the description of that insect. *M. flaviventris*, Smith, from Texas and Florida,

apparently comes near *M. flavonotata*, but is much larger (4 millim.) and also differs in colour. *M. flaviventris* is said to have a dorsal carina on the posterior tibiæ and on the first joint of the posterior tarsi; in *M. flavonotata* there is only the faintest trace of a dorsal carina on the tibiæ.

33. **Mordella nigromaculata.** (Tab. XII. fig. 20.)

Moderately elongate, narrow, reddish-yellow, the eyes black, the elytra with a common scutellar spot, the shoulders, a broad median fascia, and the apices black; the pubescence partaking of the ground-colour. Head regularly convex; palpi testaceous, the last joint of the maxillary pair broadly triangular, its apical side scarcely shorter than the inner or outer sides; (antennæ broken off); elytra elongate, convex, the scutellar region somewhat depressed; beneath entirely testaceous; pygidium very slender and compressed, very long and acuminate, more than twice the length of the hypopygium; legs testaceous, the extreme apex of the hind tibiæ and the apex of each hind tarsal joint piceous; hind tibiæ and first joint of hind tarsi with a faint dorsal carina.

Length to end of the elytra $3\frac{2}{3}$, to tip of the pygidium $4\frac{1}{2}$, millim.; breadth $1\frac{1}{3}$ millim.

Hab. Mexico, Cordova (*Sallé*).

One example. Allied to *M. flavonotata*, but much more elongate and with a very different system of coloration. The black median and apical fasciæ are formed by rounded spots which are confluent at the suture with those on the opposite elytron.

34. **Mordella lineatipyga.** (Tab. XII. fig. 21.)

Elongate, narrow, cuneiform, black; the head in great part brown-pubescent, the sides narrowly white-pubescent; the prothorax with a very broad blackish-pubescent median vitta and a narrower similarly coloured stripe on either side of it (the former extending to the apex but not to the base, the latter not reaching either the base or the apex), for the rest clothed with whitish pubescence which (except at the sides) is intermixed with brown hairs; the elytra obscure testaceous at the shoulders, for the rest black, with the following brownish-cinereous-pubescent markings—a short stripe (widened in front) on the middle of the disc just below the base, a transverse fascia a little beyond the middle (not reaching the suture or lateral margin), and a curved narrower fascia just before the apex, the latter connected at the suture with a narrow stripe which extends upwards to the base and is continued along it to the shoulders,—the pubescence on the rest of the surface (the humeri excepted) black; the pygidium whitish-pubescent, with a blackish line along the middle. Palpi testaceous, the last joint of the maxillary pair broadly securiform; antennæ pitchy-brown with the basal four joints testaceous, long and slender, joints 3 and 4 about equal in length, 4 a little stouter than 3, 5–11 broader than 4, all much longer than broad, 5–10 slightly decreasing in length, feebly subserrate, 11 much longer than 10; scutellum transversely triangular, rounded behind; elytra elongate, narrowing from the base; beneath black, densely clothed with white pubescence, the ventral segments with a little brown pubescence at the sides behind; pygidium short and stout, conical, not twice the length of the hypopygium; legs moderately slender (the hind pair excepted), the two anterior pairs in great part and the posterior tibial spurs testaceous, the hind pair piceous, the penultimate joint of the anterior and middle tarsi feebly dilated.

Length to end of the elytra $3\frac{1}{4}$, to tip of the pygidium 4, millim.; breadth $1\frac{1}{3}$ millim.

Hab. Panama, Bugaba (*Champion*).

One example. In the form of the scutellum this little species is almost intermediate between *Tomoxia interrupta* and *Mordella*; but as the scutellum is really subtriangular (or rather trapezoidal), the insect is best placed in *Mordella*. The last joint of the

maxillary palpi is broadly securiform; the antennæ long and slender. *M. lineatipyga* is not at all closely allied to any other species here described.

35. **Mordella univittata.** (Tab. XII. fig. 22.)

Elongate, convex, black, very densely punctured; the head, prothorax, and scutellum densely clothed with yellowish-cinereous or golden pubescence, the prothorax with a faint median blackish-brown-pubescent vitta and a large similarly coloured oblong spot on either side of it (the former much narrowed in front, extending to the apex and almost to the base, the latter placed nearer to the base than to the apex); the elytra each with a broad oblique stripe on the disc extending from the shoulder to the apex and the suture narrowly from the base downwards yellowish-cinereous- or golden-pubescent, for the rest clothed with blackish-brown pubescence; the pygidium yellowish-cinereous-pubescent to about the middle, darker beyond. Head very convex; palpi testaceous, the last joint of the maxillary pair stout, broadly triangular; antennæ pitchy-brown with the two basal joints testaceous, long and slender, joints 3 and 4 thin, subequal, 5–11 moderately widened, much longer than broad, 5–10 subserrate, almost equal in length, 5–7 rather wider than the following joints, 11 a little longer than 10; elytra moderately long; beneath densely and uniformly clothed with yellowish-cinereous pubescence, without darker markings; pygidium rather slender, elongate, pointed at the tip, more than twice the length of the hypopygium; legs black, the anterior and intermediatæ coxæ, femora, and tibiæ (the apical half of the latter excepted), and the hind tibial spurs, testaceous.

Length to end of the elytra $3\frac{2}{3}$–4, to tip of the pygidium $4\frac{1}{2}$–$5\frac{1}{3}$, millim.; breadth $1\frac{1}{2}$–$1\frac{2}{3}$ millim.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*); Panama, Bugaba (*Champion*).

Two examples, agreeing perfectly with each other; the one from Bugaba is a female, the other possibly a male. In this species the head is very convex, much as in *Tomoxia interrupta* and *T. fulviceps*. It may be recognized from the other *Mordellæ* here described by the broad uninterrupted oblique stripe of yellowish-cinereous pubescence on each elytron, this stripe extending from the shoulder to the apex and there connected with the very narrow sutural one. The antennæ are long and comparatively slender, the last joint of the maxillary palpi is broadly triangular, and the pygidium is elongate and rather narrow.

36. **Mordella atricolor.**

Elongate, rather broad, entirely black, the pubescence above and beneath black, the elytra in one example with a few scattered intermixed single cinereous hairs. Labrum, mandibles, and palpi black, the last joint of the maxillary palpi stout, triangular; antennæ black, long, joints 4–11 moderately widened, 4 much wider and longer than 3, 5 broader than 4, 6–10 obliquely subquadrate, about as broad as long, and decreasing slightly in width, 11 longer and rather narrower than 10; prothorax with the median basal lobe broadly rounded; elytra comparatively long and convex; pygidium conical, moderately long, about twice the length of the hypopygium; legs entirely black, comparatively stout.

Length to end of the elytra $5\frac{1}{2}$, to tip of the pygidium $6\frac{2}{3}$, millim.; breadth $2\frac{1}{4}$ millim.

Hab. Mexico, Hacienda de la Imagen 4000 feet, Acaguizotla 3500 feet, both in Guerrero (*H. H. Smith*).

Two examples. Exceedingly like the European *M. aculeata*, Linn., but differing from it by its larger size, stouter build, broader apical joint of the maxillary palpi, and black mouth-parts, and also by the form of the antennæ—in *M. atricolor* joints 6–10

are widened on the inner side from near the base and are therefore less triangular in shape. The more elongate antennæ, the stouter fourth joint, and the obliquely quadrate shape of joints 6–10 separate *M. atricolor* from *M. scutellaris*. So far as can be ascertained without dissection, the outer lobe of the maxilla is short, not elongated as it is in *M. aculeata*. The pubescence of the head, thorax, and elytra is uniformly black; in one example, however, a few single scattered cinereous hairs are visible upon the elytra.

37. **Mordella pustulosa.** (Tab. XII. figg. 23–25.)

Elongate, rather broad, black; the head cinereo-pubescent; the prothorax with a broad black median vitta (extending to the apex but not to the base) and a large rounded transverse black spot on either side of this about the middle, for the rest yellowish-cinereous-pubescent; the scutellum cinereo-pubescent; the elytra with the suture for a short distance from the base downwards, an oblique mark on the disc in a line with the lower portion of this, curving outwards and narrowly extended to the base, a short curved oblique stripe external to it, an oblong rounded spot close to the suture before the middle, and a rather broad angulated fascia some distance beyond the middle (deeply excised on its anterior edge near the suture and almost divided in the middle of the disc by a line of black pubescence extending inwards from its posterior margin) golden-pubescent, the rest of the pubescence black; the pygidium cinereo-pubescent towards the base, black beyond. Head convex, obsoletely canaliculate; the last joint of the maxillary palpi piceous, broad and securiform in both sexes; antennæ black, sometimes reddish towards the base, moderately long in both sexes, joint 3 slender, 4–11 wider, much longer than broad, 4–10 serrate, 5–7 more strongly so; elytra narrowing from the base, moderately long, flattened on the disc, declivous laterally, with rather prominent shoulders; beneath with the pubescence in great part cinereous; pygidium moderately long, somewhat obtuse at the tip, especially in the female, one and a third or one and a half times as long as the hypopygium, a little shorter in the female; legs black, the hind tibial spurs (and the anterior femora in part) testaceous; the anterior tibiæ a little curved and the anterior femora ciliate within in the male.

Var. α. The postmedian fascia divided into two spots on each elytron (placed obliquely, one before the other); the anterior femora entirely testaceous.

Var. β. The sutural patch abbreviated, the oblique mark on the disc at the base divided into two spots (placed one below the other), the curved oblique stripe external to it lower down extending to beyond the middle of the elytra and broken up into a series of spots, and the postmedian fascia much narrower than in the type, not reaching to the suture and deeply excised on its lower edge. (Fig. 24.)

Var. γ. As in β, but with the oblique stripe below the shoulders much abbreviated or almost obsolete (sometimes represented by a short transverse mark), and the postmedian fascia reduced to a narrow transverse lunate mark or small spot on each elytron. (Fig. 25.)

Length to end of the elytra $4\frac{1}{2}$–7, to tip of the pygidium $6\frac{1}{3}$–$8\frac{1}{2}$, millim.; breadth $2\frac{1}{4}$–3 millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Belt*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Nine examples. The description is chiefly taken from a large well-marked example from Chontales; of the var. α we have only one specimen, from Chiriqui; of the var. β one female only, from Chontales; and of the var. γ six specimens, one from Chontales and the rest from Chiriqui. The insect varies very much in size, and also in the form of the postmedian fascia—in the var. γ it being reduced to a small lunate mark or punctiform spot. In the var. β the oblique line of spots on the outer portion of the disc is not symmetrical with that on the opposite elytron. The anterior femora in one example are entirely testaceous. The thorax is similarly marked in all the forms. The much smaller size, shorter and more pointed pygidium, very different elytral markings, &c.

distinguish the species from *M. signata*. The antennæ have their joints 4–10 serrate, 5–7 more strongly so; the penultimate joints are in both sexes about twice as long as broad. In *M. signata* the fourth antennal joint is very little wider than the third. The tibial spurs are testaceous. The light pubescence varies in colour from ashy-white to golden.

38. **Mordella septemnotata.** (Tab. XII. fig. 26.)

Elongate, moderately broad, black; the head with a very narrow line of cinereous pubescence along the base and also with some cinereous pubescence in front, the rest of the pubescence black; the prothorax somewhat broadly margined on all sides with cinereous pubescence, the rest of the pubescence black; the scutellum cinereo-pubescent; the elytra densely clothed with whitish-cinereous pubescence, a large rounded transverse spot on either side of the suture close to the base, a short elongate stripe external to it reaching the base, a broad median fascia, narrowing inwardly and not quite reaching the suture, and the apical third black; the pygidium cinereo-pubescent at the extreme base, for the rest black. Palpi black, the last joint of the maxillary pair stout, subtriangular (♀); antennæ black, moderately stout, joints 4–11 widened, 4 very much longer and wider than 3 but narrower than 5, 5–9 rather longer than broad, 10 about as broad as long; elytra moderately long, gradually narrowing from the base, flattened on the disc, with rather prominent humeral callus; the underside in great part black, the ventral segments at the base and the side-pieces of the metasternum with a little cinereous pubescence; pygidium (♀) short, rather obtuse at the tip, about twice the length of the hypopygium; legs black, the tibial spurs lighter.

Length to end of the elytra $6\frac{1}{2}$, to tip of the pygidium $7\frac{1}{2}$, millim.; breadth $2\frac{2}{3}$ millim. (♀.)

Hab. Mexico, Acaguizotla in Guerrero (*H. H. Smith*).

One female example. Allied to *M. mexicana*; the black pubescence much more extended, occupying by far the greater portion of the head and thorax (the sides only of the latter being cinereous), the elytra with an elongate additional mark at the shoulders, a much broader apical patch (which is not narrowed towards the suture in front), the median fascia more widened outwardly, and the basal spot much larger and placed more in front; the legs and antennæ are stouter, entirely black, the antennæ considerably shorter.

39. **Mordella mexicana.** (Tab. XII. fig. 27.)

Elongate, moderately broad, black, cinereo-pubescent; the prothorax with a small rounded, oblique black spot on either side of the middle of the disc; the elytra with a small rounded spot on either side of the suture near the base, a rather broad median fascia, not extending to the suture and widening a little externally, and the apex broadly (but more narrowly so towards the suture in front) black; the pygidium and entire under surface cinereo-pubescent. Head obsoletely canaliculate behind. Palpi testaceous, the last joint of the maxillary pair darker, the latter stout, subtriangular; antennæ pitchy-brown with the basal four joints testaceous, rather slender, joint 3 narrow, 4–11 wider, much longer than broad, 4–10 serrate, 5–7 more strongly so; elytra moderately long, gradually narrowing from the base, flattened on the disc, with rather prominent humeral callus; pygidium moderately long, obtuse at the tip, nearly twice the length of the hypopygium; legs black, the anterior femora flavo-testaceous, the tibial spurs testaceous; the anterior tibiæ a little curved, and the anterior femora fringed with long hairs within, in the male.

Length to end of the elytra 5, to tip of the pygidium 6, millim.; breadth $2\frac{1}{3}$ millim. (♂.)

Hab. Mexico, San Andres Tuxtla (*Sallé*).

One male example. In the form of the antennæ and pygidium this insect resembles

M. pustulosa, and in the elytral markings *M. septemnotata*; the cinereous pubescence on the thorax and elytra, however, occupies a much larger portion of the surface than it does in *M. septemnotata*. The black apical fascia is partly interrupted in front, owing to the cinereous pubescence being extended a short distance downwards along the suture. The antennæ are longer and more slender than in *M. septemnotata*, and have the basal joints testaceous.

40. **Mordella cata.**

Moderately elongate, black; the head, prothorax, and scutellum yellowish-cinereous-pubescent, the prothorax with an ill-defined black median vitta (not reaching the base or apex) and a large oblong black patch on either side of it; the elytra obscure castaneous at the shoulders, with an oblique stripe extending from the humeri towards the suture, a small spot below it on the lateral margin, an oblique spot extending outwards from the suture a little below the middle, the suture very narrowly from this spot to the base, and the base itself, narrowly, yellowish-cinereous-pubescent, for the rest clothed with black pubescence; the pygidium blackish-pubescent. Palpi testaceous, the last joint of the maxillary pair a little darker at the tip, very broadly triangular, its apical and outer sides about equal in length, each a little longer than the inner side; antennæ testaceous with the apical four joints pitchy-brown, long and rather slender, joint 3 short, as long as but more slender than 2, 4–11 moderately widened, much longer than broad, 4 nearly twice as long as and very much broader than 3, 5–7 the widest, 11 oblong-ovate, the width and length of 10; elytra moderately long, rather convex; beneath cinereo-pubescent, the ventral segments cinereo-pubescent at the base only, for the rest clothed with dark brownish pubescence; pygidium long and rather slender, broad at the base, not quite twice the length of the hypopygium; the intermediate and posterior tibiæ and tarsi in great part and the anterior legs entirely testaceous, the four hinder femora piceous.

Length to end of the elytra $4\frac{1}{4}$, to tip of the pygidium $5\frac{1}{4}$, millim.; breadth $1\frac{1}{2}$ millim.

Hab. Mexico, Cordova (*Sallé*).

One example, probably a male. Somewhat resembling *M. arcuata* in the arrangement of the cinereous pubescence of the elytra (in *M. arcuata*, however, the suture is not cinereo-pubescent); but much smaller than that insect, the apical joint of the maxillary palpi broadly triangular, the antennæ more filiform and with the fourth joint stouter, the pygidium more slender and almost pointed, and the post-median fascia of the elytra reduced to an oblique mark on either side of the suture. The yellowish-cinereous-pubescent markings on the basal portion of each elytron almost enclose a large blackish-pubescent spot.

41. **Mordella leucogramma.** (Tab. XIII. fig. 1, ♀.)

Elongate, rather narrow, black; the head cinereo-pubescent; the prothorax with a black median vitta (slightly widened behind and not quite reaching the base or apex) and a very large black triangular patch on either side of it, the rest of the pubescence cinereous; the scutellum cinereo-pubescent; the elytra each with an oblique curved stripe extending from the shoulders downwards towards the suture and widened behind into a rather large patch (so as to partly enclose a large black basal spot), a curved oblique stripe below this externally (more or less divided into two spots—one on the disc and one some distance below the shoulder), a rather broad fascia beyond the middle (excised on its lower edge, curving a little downwards towards the suture, and sometimes not reaching the suture or lateral margin), and the base behind the scutellum cinereo- or whitish-pubescent, the rest of the pubescence black; the pygidium cinereo-pubescent to about the middle, black beyond. Palpi testaceous, the last joint of the maxillary pair darker, the latter very large, stout, and subequilaterally triangular in the male, smaller and subcultriform in the female; antennæ

black with the basal four or five joints testaceous, rather long, joint 3 slender, 4–11 moderately widened, longer than broad, 4 triangular, a little narrower than 5, 5–10 subserrate; elytra moderately long; beneath cinereo-pubescent, the ventral segments black at the apex; pygidium rather short and slender, acuminate, shorter in the female, not quite twice the length of the hypopygium; legs black, the anterior femora and tibiæ more or less and the posterior tibial spurs testaceous.

Length to end of the elytra 3–$3\frac{3}{4}$, to tip of the pygidium $3\frac{3}{4}$–$4\frac{1}{4}$, millim.; breadth $1\frac{1}{4}$–$1\frac{1}{3}$ millim. (♂ ♀.)

Hab. Guatemala, Capetillo, Dueñas (*Champion*).

Three examples. As in *M. biformis* and *M. leucosticta*, the last joint of the maxillary palpi in the male is much stouter than in the female. In the slender pygidium &c. *M. leucogramma* comes very near *M. leucosticta*, but differs from that species in having the fourth joint of the antennæ triangular and much wider than the third; the oblique stripe extending from the shoulder downwards is shorter and bent more abruptly inwards behind, and this is followed externally by a second oblique stripe or two oblong spots, of which there is no trace in *M. leucosticta*. The more slender pygidium, the broader fourth joint of the antennæ, and the testaceous tibial spurs distinguish it from *M. albopicta*, *M. tetraspilota*, &c. In two of the specimens the second oblique stripe is represented by two oblong (or small) rather widely separated spots—one on the disc and one below the shoulder-stripe; these marks are not always symmetrical, and in two examples they are differently formed on one elytron to what they are on the other.

42. **Mordella cingulata.** (Tab. XIII. figg. 2, ♂; 2 *a*, maxillary palpus.)

Elongate, rather narrow, black; the head, prothorax, and scutellum brownish-cinereous-pubescent, the pubescence on the disc of the prothorax indeterminately darker; the elytra each with a broad patch in front (occupying the basal third, narrowing on the disc behind, and extending a little downwards at the sides), enclosing a large black basal spot, and a narrow fascia just beyond the middle (not quite reaching the suture or lateral margin, and curving downwards towards the suture) brownish-cinereous-pubescent; the pygidium clothed with black pubescence, cinereous only at the extreme base. Palpi testaceous, the last joint of the maxillary pair a little darker, the latter stout and securiform. Antennæ (♂) black with the basal three joints and the basal half of the fourth testaceous, rather long, joint 3 slender, very short, 4–11 moderately dilated, much longer than broad, 4 triangular, more than twice as long and fully twice as wide as 3, very little smaller than 5, 4–8 distinctly serrate, 9 and 10 slightly narrower and more parallel; elytra moderately long; beneath in great part cinereo-pubescent; pygidium rather slender, long and acuminate, about twice the length of the hypopygium; legs black, the anterior and intermediate femora testaceous, the tibiæ of the same pairs of legs pitchy-brown, the tibial spurs testaceous; the anterior tibiæ (♂) distinctly curved.

Length to end of the elytra $3\frac{1}{3}$, to tip of the pygidium 4, millim.; breadth $1\frac{1}{2}$ millim. (♂.)

Hab. Panama, Caldera in Chiriqui (*Champion*).

One male example. Closely resembling *M. leucosticta*, but differing from it by the triangularly dilated fourth joint of the antennæ, the third joint also being shorter; the light pubescence is of a fusco-cinereous colour and is more extended on the basal portion of the elytra, completely enclosing a large black basal spot; the post-median fascia is placed a little more forwards and is curved downwards towards the suture. In the form of the antennæ the species resembles *M. pustulosa*.

43. **Mordella biformis.** (Tab. XIII. figg. 3, ♂; 3 *a*, antenna, 3 *b*, maxillary palpus, ♂; 4, ♀; 4 *a*, maxillary palpus, ♀.)

♂. Elongate, rather narrow, black; the mentum and mouth-parts (the tips of the mandibles excepted) testaceous; the head cinereo-pubescent; the prothorax rather broadly bordered on all sides with cinereous pubescence, which in one or two examples extends upwards on either side of the middle to the anterior margin so as to enclose three large oblong ill-defined spots, the rest of the surface sparsely clothed with blackish pubescence; the scutellum cinereo-pubescent; the elytra each with two short stripes (often confluent) placed parallel to each other near the suture some distance before the middle—the external one curving outwards, extending forwards to the base and continued along it to meet a triangular scutellar patch (nearly or quite enclosing a large oblique black spot), and more or less coalescent with an oblique post-humeral stripe,—and a long comma- or c-like mark on the disc beyond the middle cinereo-pubescent, the rest of the pubescence black; the pygidium cinereo-pubescent at the base, black beyond. Palpi testaceous, the apical joint of the maxillary pair infuscate, the latter very stout, securiform, and thickly clothed with hairs beneath; antennæ black with the basal three or four joints testaceous, long, joint 3 slender, 4–11 much longer than broad, moderately widened, 4–8 serrate (5–7 more distinctly so), 9–11 narrower; elytra moderately long; beneath black, the sides sometimes with a metallic violaceous or æneous lustre, the venter piceous, the last two segments a little paler, the pubescence in part cinereous, in part black; pygidium rather slender, long and acuminate, compressed at the sides, nearly twice as long as the hypopygium; legs piceous or black, the anterior femora in great part and the coxæ flavous, the intermediate femora (except at the apex), and sometimes the base of the anterior tibiæ reddish-testaceous, the tibial spurs testaceous, those of the posterior pair very unequal in length (the inner one twice as long as the outer one); the anterior tibiæ slightly curved.

♀. Broader; the last joint of the maxillary palpi much smaller and narrower, its apical and outer sides about equal in length, each very much shorter than the inner side; the antennæ with joints 4–8 a little less widened; the prothorax rufous, with the sides and apex narrowly infuscate or black; the pygidium, except at the tip, and the last two ventral segments more or less rufous; the anterior and intermediate femora darker; the anterior tibiæ straighter.

Length to end of the elytra $3\frac{1}{2}$–$4\frac{1}{2}$, to tip of the pygidium $4\frac{1}{2}$–$5\frac{1}{2}$, millim.; breadth $1\frac{1}{2}$–2 millim. (♂ ♀.)

Hab. Mexico, Cerro de Plumas, Oaxaca (*Höge*), Cordova, Tehuantepec (*Sallé*), Teapa (*H. H. Smith*); British Honduras (*Blancaneaux*); Guatemala, Cahabon, Chiacam, San Juan, and San Gerónimo in Vera Paz, Zapote (*Champion*), Coban and Panzos (*Conradt*).

This is one of the commonest species of *Mordella* in Southern Mexico and Guatemala, whence we have obtained a large number of examples. The sexes, both of which have been obtained in most of the above localities, differ considerably in the colour of the thorax and in that of the terminal segments of the body, as well as in the shape and clothing of the apical joint of the maxillary palpi. The cinereo-pubescent markings of the elytra are sometimes reduced a little in size, sometimes much more extended; the comma-like mark on each elytron beyond the middle is always distinct. The thorax usually has the base, apex, and sides cinereo-pubescent, the rest of the surface being only very sparsely pubescent. In the rufous thorax, terminal ventral segments, and pygidium the female closely resembles the corresponding sex of the following species. The sexes of the European *Mordellistena abdominalis* (Fabr.) differ from each other in colour in a somewhat similar way. The N.-American *M. oculata*, Say (= *jovialis*, Lec.), seems to be an ally of *M. biformis*.

44. **Mordella rutilicollis.** (Tab. XIII. fig. 5, ♀.)

♀. Elongate, cuneiform, moderately broad, black, the labrum and mouth-parts (the tips of the mandibles excepted) testaceous; the head cinereo-pubescent, the pubescence sometimes golden-brown in colour on either side of the middle; the prothorax rufous, with the lateral margins and base, narrowly or somewhat broadly, infuscate or black, the sides, base, and apex bordered with cinereous pubescence, the rest of the surface much more sparsely clothed with darker pubescence; the scutellum cinereo-pubescent; the elytra each with an elongate-subtriangular mark on the disc some distance before the middle, connected anteriorly at its outer extremity with a short stripe which extends along the base to the suture (nearly enclosing a large oblique black spot), an oblique stripe some distance below the shoulders, a narrow transverse fascia beyond the middle (not reaching the suture or lateral margin), and the suture very narrowly from the base nearly to the apex cinereo-pubescent, the rest of the pubescence entirely black; the pygidium, except at the tip, rufous, cinereo-pubescent. Head obsoletely canaliculate behind; the palpi testaceous, the last joint of the maxillary pair infuscate, the latter stout, subtriangular; antennæ black with the three or four basal joints testaceous, long, rather slender, joint 3 narrow, 4–11 wider, much longer than broad, 4–7 subtriangular, 8–11 more parallel and slightly narrower; elytra moderately long; beneath black, the last two ventral segments, and sometimes the third in the middle, rufous, the pubescence in great part cinereous; pygidium moderately long, blunt at the tip, about twice the length of the hypopygium; legs black, the anterior femora and the base of the anterior tibiæ sometimes fusco-testaceous, the tibial spurs testaceous.

Length to end of the elytra 4–6½, to tip of the pygidium 5–8½, millim.; breadth 1⅔–2⅔ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Four examples, apparently all females. Closely allied to *M. biformis*, but differing from the female of that species by having the suture of the elytra narrowly cinereous, the long comma-like mark beyond the middle replaced by a transverse fascia, the two parallel stripes near the suture before the middle replaced by an elongate-triangular spot, and the pygidium shorter and more obtuse at the tip. None of the examples of either sex of *M. biformis* show the slightest trace of a cinereous line along the suture nor of the comma-like mark being replaced by a transverse fascia. It is not improbable that the male of *M. rutilicollis* has the thorax and the terminal segments of the body black. The markings of the elytra approach those of *M. insulata*, Lec. (figured by J. B. Smith, Trans. Am. Ent. Soc. x. t. 2. fig. 5).

45. **Mordella erythrocephala.** (Tab. XIII. fig. 6.)

Elongate, rather narrow; the head entirely rufous, the prothorax black, with the base and sides rather broadly flavo-testaceous, the scutellum black, the elytra black, each with a flavo-testaceous discoidal stripe extending from the base nearly to the apex (wide at the base and narrow beyond), the pygidium reddish-testaceous; the pubescence in great part partaking of the ground-colour. Head regularly convex; palpi obscure testaceous, the last joint of the maxillary pair piceous, the latter subtriangular, its inner and outer sides about equal in length, each very much longer than the apical side; antennæ long and rather stout, black, the three basal joints a little paler, joints 4–11 moderately widened, longer than broad, 4 much longer and wider than 3 but narrower than 5, 7–10 decreasing in width, 11 as long as but much narrower than 10; elytra convex, nearly four times as long as the prothorax; beneath broadly black at the sides, for the rest flavo-testaceous, cinereo-pubescent; pygidium very slender and compressed, long, and acuminate, more than twice the length of the hypopygium; legs rather slender, the anterior and intermediate femora entirely, the basal two-thirds of the hind femora, the anterior and intermediate tibiæ in their basal half, the base of the hind tibiæ and their spurs, and the hind tarsi in great part testaceous, for the rest piceous, the penultimate joint of the four anterior tarsi somewhat broadly dilated, the inner spur of the hind tibiæ exceedingly elongate.

Length to end of the elytra 3¾, to tip of the pygidium 4½, millim.; breadth 1⅓ millim.

Hab. Guatemala, Cahabon (*Champion*).

One example only of this peculiarly coloured species was obtained.

46. **Mordella teapensis.** (Tab. XIII. fig. 7.)

Moderately elongate; the head testaceous, with a large rounded piceous patch in the middle; the prothorax flavo-testaceous, with a rather broad median vitta and the sides anteriorly black; the scutellum black; the elytra black, each with a broad flavo-testaceous discoidal stripe extending from the base nearly to the apex and reaching the suture behind; the pygidium flavo-testaceous; the pubescence partaking of the ground-colour. Head convex; palpi testaceous, the last joint of the maxillary pair elongate-triangular, rather narrow, its apical side much shorter than the inner or outer sides; antennæ long and slender, pitchy-brown, the three basal joints testaceous, joint 3 short, 4–11 moderately widened, much longer than broad, 4 much longer and wider than 3 but narrower than 5, 7–10 slightly decreasing in width; elytra convex, a little more than three times as long as the prothorax; beneath with the metasternum (except in the middle) and the sides of the ventral segments 1–4 black, for the rest flavous; pygidium very slender and compressed, moderately long; legs entirely flavo-testaceous; hind tibiæ with traces of a faint dorsal carina.

Length to end of the elytra 3, to tip of the pygidium $3\frac{1}{2}$, millim.; breadth 1 millim.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

One specimen. Near *M. erythrocephala*, but differing by its less elongate shape, the much more slender antennæ, and the longer and narrower apical joint of the maxillary palpi, as well as in colour. The discoidal vitta on each elytron is broader and placed nearer the suture than in *M. erythrocephala*. The posterior coxæ are entirely flavous, as well as the ventral segments in the middle and the centre of the metasternum.

47. **Mordella flavifrons.** (Tab. XIII. fig. 8.)

Short, broad, thickly and uniformly clothed with cinereous or yellowish-cinereous pubescence, the pubescence paler on the light-coloured parts and a little more obscure on the dark parts but not forming spots or markings; the head reddish- or flavo-testaceous, with the vertex black, the black colour sometimes more extended and reaching to the occiput, the eyes also black; the prothorax more or less reddish or reddish-testaceous on either side of the middle anteriorly, this colour sometimes more extended so as to leave only a broad median vitta and a large patch on either side of the base laterally black or piceous; the scutellum and elytra black, the apex of the latter narrowly testaceous or yellow; the pygidium reddish-testaceous, darker towards the tip. Palpi testaceous, the last joint of the maxillary pair very broad and securiform in both sexes; antennæ testaceous, long and very slender in both sexes, joints 3 and 4 thin, subequal, 5–11 a little widened, 5–10 very much longer than broad, feebly subserrate, 8–10 subequal, 11 a little longer than 10; elytra short, not two and a half times the length of the prothorax; beneath, the prothorax excepted, black, the ventral segments at the apex or in great part reddish-testaceous, densely and finely punctured, each ventral segment with a row of coarse punctures on the hind margin extending completely across, each of these punctures bearing a long coarse golden hair, the rest of the under surface cinereo-pubescent; pygidium moderately long, rather slender, very little shorter in the female, more than twice the length of the hypopygium; legs comparatively slender, the two anterior pairs (the apical half of the middle tibiæ excepted) testaceous, the hind pair (the base of the tibiæ and the tips of the tarsal joints excepted) piceous, the tibial spurs testaceous; penultimate joint of the anterior and middle tarsi produced into a long broad lobe beneath the apical joint and extending to two-thirds of its length, the lobe excavate above for the reception of the last joint.

Length to end of the elytra 3–$3\frac{1}{4}$, to tip of the pygidium $3\frac{1}{2}$–4, millim.; breadth $1\frac{1}{2}$–$1\frac{1}{3}$ millim. (♂ ♀.)

Hab. Guatemala, El Reposo, San Isidro (*Champion*).

Four specimens only of this curious species were obtained, all from the low hot Pacific coast-region. The form of the penultimate joint of the four anterior tarsi, together with the very slender antennæ, almost uniform pubescence, &c., distinguish it at once from all the other *Mordellæ* here described. Viewed from above the penultimate joint appears to be strongly bilobed, the lobes extending to two-thirds the length of the apical joint and connected beneath by a membranous piece which is slightly emarginate at the apex. In addition to the usual pubescence, each of the ventral segments has a fringe of much coarser hairs on its hind margin, these hairs arising from a line of coarse punctures.

48. **Mordella seriata.** (Tab. XIII. figg. 9 ; 9 *a*, antenna.)

Moderately elongate, rather broad, pitchy-brown; the head with a broad band of dark brown pubescence along the middle, the sides with yellowish-cinereous pubescence ; the prothorax with small yellowish-cinereous-pubescent spots scattered over the greater part of the surface, these becoming partly coalescent on the anterior portion, a large oblong patch on the middle of the disc behind and a small one at the apex free from spots, the rest of the surface with dark brown pubescence ; the elytra with the following yellowish-cinereous markings—a small spot at the base close to the shoulders, a larger spot near the suture a little below the base, one opposite to it on the lateral margin, one lower down on the outer portion of the disc midway between these, a narrow angulated fascia at one-third from the apex (not reaching the suture or lateral margin), and numerous serially-arranged small punctiform spots (a row on either side of the suture the most distinct), these latter extending from the base to the apex,—the rest of the pubescence dark brown ; the pygidium yellowish-white-pubescent, with a dark brown stripe along the middle. Head with a very distinct median groove ; palpi piceous, the last joint of the maxillary pair oblong ovate, narrow ; antennæ rather long, joints 3–5 very slender, 4 and 5 subequal, each a little shorter than 3, 6–11 broadly widened and forming a long club, 6–10 strongly serrate, 6 triangular, about as broad as long, 7 a little shorter, 8–10 very strongly transverse, 9 and 10 about twice as broad as long, 11 broad ovate, a little narrower than, and nearly twice as long as, 10, 1–5 pitchy-brown, 6 and 7 yellow, 8–11 black ; elytra moderately long ; beneath pitchy-brown, the pubescence in great part yellowish-cinereous ; pygidium very short and stout, blunt at the tip, barely twice the length of the hypopygium ; legs slender (the hind pair excepted), pitchy-black, the two anterior pairs paler, the tibial spurs testaceous, the penultimate joint of the anterior and intermediate tarsi filiform, the intermediate tibiæ and tarsi about equal in length.

Length to end of the elytra 4, to tip of the pygidium $4\frac{1}{3}$, millim.; breadth $1\frac{2}{3}$ millim.

Hab. Panama, Bugaba (*Champion*).

One specimen only. In the markings of the upper surface extremely like *M. stictico-ptera* (the Chacoj example of which agrees almost exactly with it) ; but differing totally from that species in the form of the fifth antennal joint—very slender and scarcely wider than the fourth in *M. seriata*, broadly triangularly widened and fully three times as wide as the fourth in *M. stictico-ptera*. At first sight *M. seriata* would appear to be only the other sex of *M. stictico-ptera* ; the difference, however, in the form of the antennæ is too great to be sexual.

This is one of a little group of species characterized by the oblong ovate apical joint of the maxillary palpi, the very short blunt pygidium, the simple penultimate joint of the four anterior tarsi, and the more or less dilated antennæ, the latter with the apical or intermediate joints yellow.

49. **Mordella apicicornis.** (Tab. XIII. figg. 10, ♂ ; 10 *a*, antenna.)

Elongate, black ; the head cinereo-pubescent, with intermixed dark brown hairs which are more numerous on the posterior half; the prothorax with black pubescence amongst which scattered cinereous hairs are visible ; the scutellum with black pubescence ; the elytra with the following golden-pubescent markings—a small punctiform spot on the middle of the disc a little below the base, a very minute spot lower down and almost in a line with it just before the middle, a similar minute spot midway between these but near the lateral margin, an angulated fascia at about one-third from the apex (barely reaching the suture or lateral margin, widening inwardly, and extending a short distance downwards along the suture), and two small spots placed in a line transversely just before the apex,—the rest of the pubescence entirely black ; the pygidium blackish-pubescent. Head longitudinally impressed in the middle anteriorly ; palpi piceous, the last joint of the maxillary pair oblong ovate, narrow ; antennæ rather long, black, the apical two joints yellow, the basal joints reddish, joints 3 and 4 elongate, very thin, subequal, 5–11 very broadly widened, 5–10 strongly serrate, 6–10 much broader than long (6–9 the widest), 11 oblong ovate, much longer than 10 ; elytra moderately long ; beneath black, the base of each of the ventral segments and the posterior coxæ with some cinereous pubescence ; pygidium very short, blunt at the tip, about twice the length of the hypopygium ; legs slender (the hind pair excepted), black, the extreme tips of the tarsi and the tibial spurs testaceous, the penultimate joint of the anterior and intermediate tarsi filiform, the intermediate tibiæ and tarsi almost equal in length.

Length to end of the elytra $3\frac{1}{3}$, to tip of the pygidium 4, millim. ; breadth $1\frac{1}{3}$ millim. (♂.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

One male example. Smaller and narrower than *M. xanthosticta* ; the head and thorax without a broad median band of darker pubescence ; the elytra with a well-marked post-median fascia. The antennæ are similarly shaped and also have the apical two joints yellow.

50. **Mordella xanthosticta.** (Tab. XIII. fig. 11.)

Moderately elongate, broad, subparallel, black ; the head with a very broad band of dark brown pubescence along the middle, the sides golden-pubescent ; the prothorax with a very broad ill-defined band of brownish-black pubescence down the middle, narrowing in front and interrupted behind by a large **X**-shaped golden-pubescent mark, for the rest golden-pubescent ; the scutellum with blackish pubescence ; the elytra with the following golden-pubescent markings—three small spots placed almost in a line on the middle of the disc and equidistant from each other (the first transverse, the two others punctiform and smaller), two minute spots placed obliquely at the side near the anterior one, and a small spot at the side opposite the third, and two transverse marks placed in a line transversely just before the apex (these latter forming with the marks on the opposite elytron a common narrow interrupted fascia),—the extreme apex also edged with golden pubescence, the rest of the pubescence blackish-brown with a few intermixed golden hairs ; the pygidium with yellowish-white pubescence at the sides, blackish-brown along the middle. Head with traces of an obsolete median impressed line ; palpi piceous, the last joint of the maxillary pair oblong ovate, narrow ; antennæ rather long, black, the apical two joints yellow, the basal four testaceous, joints 3 and 4 elongate, very thin, subequal, 5–11 very broadly widened, 5–10 strongly serrate, 6–10 strongly transverse (6–9 the widest), 11 ovate, much longer than 10 ; elytra moderately long, subparallel ; beneath with blackish-brown pubescence, the base of each of the ventral segments golden-pubescent ; pygidium very short, blunt at the tip, barely twice the length of the hypopygium ; legs slender (the hind pair excepted), black, the extreme tips of the tarsi and the tibial spurs testaceous, the penultimate joint of the four anterior tarsi filiform, the intermediate tarsi and tibiæ equal in length.

Length to end of the elytra $4\frac{2}{3}$, to tip of the pygidium 5, millim. ; breadth $2\frac{1}{8}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

One specimen only, probably of the female sex.

51. **Mordella sticticoptera.** (Tab. XIII. figg. 12 ; 12 *a*, antenna.)

Moderately elongate, black or pitchy-brown ; the head with a broad band of dark brown pubescence along the middle, the sides with yellowish-cinereous pubescence ; the prothorax with small yellowish-cinereous-pubescent spots scattered nearly all over the surface, these spots becoming more numerous at the sides and in front and partly coalescing there, for the rest clothed with brownish-black pubescence, an ill-defined large oblong patch on the middle of the disc behind and a narrow one in front almost free from spots ; the elytra with the following yellowish-cinereous-pubescent markings—a small spot at the base close to the shoulders, a larger spot near the suture a little below the base, one opposite to it on the lateral margin, an angulated fascia (sometimes divided into two spots, and not reaching the suture) at about one-third from the apex, and numerous more or less serially-arranged small punctiform spots (a row on either side of the suture the most distinct) which extend from the base to the apex,—the extreme apex also more or less distinctly bordered with yellowish-cinereous pubescence, the rest of the pubescence blackish-brown ; the pygidium yellowish-cinereous-pubescent at the sides, blackish-brown along the middle. Head with traces of a faint median groove ; palpi piceous, the last joint of the maxillary pair oblong ovate, obliquely truncate at the apex ; antennæ with joints 1–4 (and sometimes the base of the fifth) testaceous, obscure testaceous, or piceous, 5–7 yellow, 8–11 black, 3 and 4 elongate, very slender, subequal, 5–11 broadly widened, 5–10 strongly serrate and gradually increasing in width, 6–10 transverse (9 and 10 nearly twice as broad as long), 11 longer than 10, short ovate ; elytra moderately long ; beneath black, the ventral segments a little lighter and, except at the sides behind, densely yellowish-cinereous-pubescent ; pygidium very short and stout, blunt at the tip, not twice the length of the hypopygium ; legs slender (the hind pair excepted), black, the two anterior pairs a little lighter, the tibial spurs testaceous, the penultimate joint of the anterior and middle tarsi filiform, the intermediate tibiæ and tarsi equal in length.

Length to end of the elytra $3\frac{2}{3}$–$4\frac{1}{2}$, to tip of the pygidium 4–5, millim. ; breadth $1\frac{1}{2}$–2 millim.

Hab. Mexico, Juquila, Tehuantepec (*Sallé*) ; Guatemala, Chacoj (*Champion*) ; Panama, Volcan de Chiriqui (*Champion*).

One example only from each locality ; these evidently include the two sexes, one of the specimens being much narrower than the others. The elytral markings vary slightly, the serially-arranged spots being larger and showing a tendency to coalesce in one example. In the peculiar coloration of the antennal joints this species somewhat resembles *M. varicornis*, the latter, however, has the apical joint yellow ; the elytral markings are also somewhat similar, but in *M. sticticoptera* the fasciæ and larger spots are much reduced in size or partly obsolete.

52. **Mordella varicornis.** (Tab. XIII. figg. 13 ; 13 *a*, antenna.)

Elongate, pitchy-black, the elytra (when denuded of pubescence) blackish-castaneous ; the head with a very broad band of dark brown pubescence along the middle, the sides golden-pubescent ; the prothorax with small oblong or transverse partly confluent patches of golden pubescence scattered all over the surface, the rest of the pubescence brownish-black ; the elytra with the following golden-pubescent markings—a large irregular patch near the suture below the base, a smaller patch lower down nearer the lateral margin, an angulated fascia at about one-third from the apex and a curved fascia just before the apex (both extending completely across), and numerous small scattered punctiform spots,—the suture also golden-pubescent, the rest of the pubescence brownish-black ; the pygidium golden-pubescent, with a blackish line along the middle. Palpi piceous, the last joint of the maxillary pair ovate ; antennæ long, joints 1–7 testaceous, 8–10 black, 11 yellow, 3 and 4 elongate, very slender, subequal, 5–10 gradually widened, serrate, 5 longer and much wider than 4, 6 and 7 a little shorter and broader, subequal, longer than wide, 8–10 much broader than 7, about as broad as long, 10 a little narrower than 9, 11 oblong ovate, much longer than 10 ; elytra comparatively long ; beneath black, the apices of the ventral segments

brownish, the ventral segments (except the apices of 1–3 laterally) golden-pubescent; pygidium very short and stout, blunt at the tip, not twice the length of the hypopygium; legs slender (the hind pair excepted), black, the knees of the anterior and middle pairs reddish, the tibial spurs testaceous, the penultimate joint of the four anterior tarsi filiform, the intermediate tibiæ and tarsi equal in length.

Length to end of the elytra $5\frac{3}{4}$, to tip of the pygidium $6\frac{1}{2}$, millim.; breadth $2\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

One example. Allied to *M. xanthosticta* and *M. sticticoptera*, but differing from both these species in having the antennæ considerably longer, more gradually and less broadly dilated (joints 5–7 relatively much narrower), and with the joints 8–10 only black, the eleventh being yellow; it is also larger and more elongate, and the golden pubescence on the elytra is differently arranged, the pubescence forming two fasciæ near the apex and two patches on the disc, between which are numerous small spots, these spots arranged in a line on either side of the suture.

53. **Mordella panamensis.** (Tab. XIII. fig. 14.)

Rather short, brownish-piceous; the head, prothorax, and scutellum clothed with yellowish-cinereous pubescence, the prothorax with a broad brownish-black-pubescent median vitta and an oblique stripe on either side of it (these markings not reaching the base or apex); the elytra with some irregular transverse markings at the base (enclosing an oblique spot on either side of the suture), some longitudinal markings at the side below these, a strongly angulated fascia at one-third from the apex, and an angulated fascia between this and the apex (both reaching the suture) yellowish-cinereous-pubescent, for the rest clothed with blackish pubescence (this forming a common large subquadrate patch before the middle and numerous spots); the pygidium cinereo-pubescent to the middle, blackish beyond. Palpi testaceous, the last joint of the maxillary pair elongate-ovate, slender; antennæ with joints 1–7 testaceous, 8–10 pitchy-brown, and 11 yellow, 3 and 4 very slender, elongate, subequal, 5–11 moderately widened, about equal in width, 5–10 decreasing in length, serrate, 6–8 about as broad as long, 9 and 10 transverse, 11 considerably longer than 10; elytra comparatively short; beneath piceous, the venter paler, yellowish-cinereous-pubescent, the ventral segments with dark brown pubescence at the sides behind; pygidium short and stout, pointed at the tip, twice the length of the hypopygium; legs slender (the hind pair excepted), in great part testaceous, the posterior femora and the apex of the posterior tibiæ piceous, the posterior tibial spurs very elongate, the penultimate joint of the anterior and intermediate tarsi filiform.

Length to end of the elytra $2\frac{2}{3}$, to tip of the pygidium $3\frac{1}{4}$, millim.; breadth $1\frac{1}{8}$ millim. (♀.)

Hab. Panama, David (*Champion*).

One specimen. This little species is allied to *M. tenuipes*, from which it differs in its much shorter, serrate antennæ (the apical joint being yellow, not piceous), much shorter legs, and shorter elytra; the elytral pubescence is also differently arranged. The antennæ are slender, though joints 5–10 are very distinctly serrate.

54. **Mordella T-album.** (Tab. XIII. fig. 15.)

Elongate, the head (except in the centre) and oral organs testaceous, the eyes, an indistinct spot on the middle of the vertex, the prothorax, elytra, and pygidium black; the head cinereo-pubescent; the prothorax with a broad black median vitta and a large oblong oblique black spot on either side of it (these markings not reaching the base or apex), for the rest clothed with white pubescence; the scutellum white-pubescent; the elytra each with a long T-shaped white-pubescent mark on the middle of the disc just before the middle and a similarly-pubescent rather broad curved fascia a little before the apex, the latter coalescing

with the mark on the opposite elytron at the suture and extending narrowly along it to the middle, the suture also narrowly bordered with white pubescence at the base; the pygidium white-pubescent at the sides, brown along the middle. Last joint of the maxillary palpi moderately stout, elongate-triangular, its outer side much longer than the inner or apical sides, the latter shorter than the inner side; antennæ slender, pitchy-brown, the five basal joints testaceous, joints 3 and 4 thin, 3 short, not longer than 2, 4 much longer than 3, 5–11 a little widened, 5–10 gradually decreasing in length, serrate, all longer than broad, 11 not longer nor stouter than 10; elytra not more than two and a half times the length of the prothorax; beneath black, thickly clothed with white pubescence; pygidium very long, moderately stout, nearly twice the length of the hypopygium, the latter unusually elongate; legs comparatively very slender (the hind pair excepted), the anterior and middle pairs (the middle tarsi excepted) testaceous, the hind pair (the tibial spurs excepted) black, the penultimate joint of the anterior and middle tarsi filiform, the intermediate tarsi considerably longer than the tibiæ of the same pair of legs, the anterior and intermediate tibiæ sinuous within.

Length to end of the elytra 3, to tip of the pygidium 4, millim.; breadth $1\frac{1}{3}$ millim.

Hab. GUATEMALA, Chacoj in the Polochic valley (*Champion*).

One specimen only of this peculiar little species was obtained, evidently a male. It differs in many respects from all the other Central-American forms: the last joint of the maxillary palpi is unusually elongate; the intermediate tarsi are considerably longer than the tibiæ of the same pair of legs; the penultimate joint of the four anterior tarsi is filiform, not in the least dilated, and formed as in the type of the genus *Tomoxia*.

55. **Mordella pretiosa.** (Tab. XIII. fig. 16.)

Moderately elongate, broad, black or brownish-black, the sides of the prothorax and the elytral humeri obscure castaneous; the head with a broad band of dark brown pubescence along the middle, the sides with yellowish-cinereous pubescence; the prothorax with a reversed cruciform brownish-black-pubescent mark on the middle of the disc (not quite reaching the base or apex, narrowing anteriorly, and interrupted in front by a line of the lighter pubescence), connected at the sides in front with a similarly-coloured oblique subtriangular patch, the rest of the surface densely and uniformly clothed with yellowish-cinereous pubescence; the elytra with the following yellowish-cinereous markings—a common transverse band at the base (enclosing one or two spots on each elytron), from which a broad branch runs a little way downward on the middle of the disc, a short interrupted stripe external to this posteriorly, an angulated fascia at about one third from the apex, a narrow straight fascia immediately before the apex (both very nearly extending to the lateral and sutural margins), and numerous scattered almost serially arranged punctiform spots,—the rest of the pubescence brownish-black; the pygidium yellowish-cinereous-pubescent, with a dark brown stripe along the middle. Head obsoletely canaliculate; palpi testaceous, the last joint of the maxillary pair slender, elongate-ovate, its apex obliquely truncate; antennæ long, testaceous, the apical one or two joints piceous, joints 3 and 4 very elongate and slender, subequal, 5–11 moderately widened, all very much longer than broad, 5–10 serrate, gradually decreasing in length, 5 longer than 4, 11 elongate-ovate, longer than 10; elytra moderately long; beneath densely yellowish-cinereous-pubescent, the posterior coxæ and the ventral segments at the sides behind with some dark brown pubescence; pygidium stout, rather short, blunt at the tip, not twice the length of the hypopygium; legs very long and slender (the hind pair excepted), the hind pair black with the tibial spurs testaceous, the two other pairs in great part testaceous, the penultimate joint of the anterior and intermediate tarsi filiform, the intermediate tarsi slightly longer than the tibiæ of the same pair of legs.

Length to end of the elytra 5, to tip of pygidium 6, millim.; breadth $2\frac{1}{3}$ millim.

Hab. MEXICO, Cordova (*Sallé*).

Two examples, agreeing perfectly with each other, their sex not ascertained. At once separable from *M. varicornis*, *M. sticticoptera*, &c., by the more slender antennæ (joints

5–11 equal in width), longer legs, longer pygidium, and different thoracic and elytral markings. The peculiarly shaped dark markings on the centre of the thorax are very sharply defined from the dense pale pubescence; the elytra have, as in *M. varicornis* &c., numerous punctiform subserially arranged spots in addition to the larger markings, these latter being more extended on the basal portion than they are in *M. sticticoptera* and *M. seriata*. The legs are very elongate, especially the intermediate pair.

56. **Mordella tenuipes.** (Tab. XIII. fig. 17.)

Moderately elongate, rather broad, brownish-black; the head and prothorax clothed with yellowish-cinereous pubescence, the latter with a broad median brownish-black-pubescent vitta and an oblique similarly-coloured stripe on either side of it (the former narrowing anteriorly and interrupted in front by a transverse line of light pubescence, the two latter widening posteriorly, these markings not quite extending to the base or apex); the scutellum brownish-black-pubescent; the elytra with numerous small yellowish-cinereous-pubescent spots scattered all over the surface, these spots coalescing here and there and at one third from the apex forming a rather broad irregular fascia and at the base laterally a short stripe, the rest of the pubescence brownish-black; the pygidium yellowish-cinereous-pubescent at the base, brown towards the tip. Palpi testaceous, the last joint of the maxillary pair darker, the latter slender, oblong-ovate; antennæ long and very slender, thickening a little outwardly, obscure testaceous, the apical four joints piceous, joints 3 and 4 very elongate and thin, subequal, 5 considerably longer than 4, widening outwardly, 6–10 slightly wider, about equal in width but gradually decreasing in length, all much longer than broad and scarcely subserrate, 11 stouter and one half longer than 10; elytra moderately long; beneath blackish-brown, the venter paler, yellowish-cinereous-pubescent; pygidium short and stout, almost pointed at the tip, not twice the length of the hypopygium; legs long and slender (the hind pair excepted), in great part obscure testaceous, the hind femora piceous, the anterior and intermediate tibiæ and tarsi very long and thin, the intermediate tarsi distinctly longer than the tibiæ of the same pair of legs, the penultimate joint of the four anterior tarsi filiform.

Length to end of the elytra 3, to tip of the pygidium 4, millim.; breadth 1½ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

One example only. *M. tenuipes* is not at all closely allied to any of the other species here described, but (though much smaller) perhaps comes nearest to *M. pretiosa*. The four anterior legs are exceedingly slender and elongate; the antennæ are subfiliform, long, and very slender, but a little thickened outwardly; the apical joint of the maxillary palpi is quite slender, oblong ovate in shape; the pygidium is short and stout, but pointed at the tip. The antennæ, legs, and palpi are still more slender than in *M. pretiosa*; the elytra (but not the head and thorax) are marked somewhat as in that species.

57. **Mordella tantilla.**

Short, cuneiform, black, the mouth-parts (the tips of the mandibles excepted) testaceous, above and beneath uniformly clothed with brownish-cinereous pubescence. Last joint of the maxillary palpi piceous, stout, subtriangular, its apical and inner sides about equal in length, and both much shorter than the outer side; antennæ piceous with the basal four joints testaceous, very short, joints 3 and 4 narrow, equal in length, 5–11 a little widened, 5–10 serrate, decreasing in length but increasing in width, 9 and 10 transverse, 11 a little longer than 10, blunt at the tip; elytra short, convex; pygidium very long and almost pointed, more than twice the length of the hypopygium; legs (the hind pair excepted) long and slender, black, the anterior

femora and tibiæ testaceous, the penultimate joint of the anterior and middle tarsi filiform, the intermediate tibiæ shorter than the tarsi of the same pair of legs, the posterior tibial spurs obscure testaceous, the inner spur very elongate.

Length to end of the elytra $2\frac{1}{3}$, to tip of the pygidium $3\frac{1}{3}$, millim.; breadth 1 millim.

Hab. GUATEMALA, Sinanja in Vera Paz (*Champion*).

One example only. Much smaller than the smallest examples of *M. scutellaris* or *M. melæna*; the anterior and middle pairs of legs more slender and with their penultimate tarsal joint filiform; the intermediate tarsi a little longer than the tibiæ of the same pair of legs; the pygidium more slender, much more elongate, and almost pointed. The last joint of the maxillary palpi is comparatively stout, as stout as in *M. melæna*; the antennæ are very short and slender, the joints from the fifth serrate and a little widened. A mutilated example from Bugaba perhaps belongs to the same species.

58. **Mordella fenestrata.** (Tab. XIII. figg. 18, ♂; 18 *a*, maxillary palpus)

Elongate, narrowly cuneiform, black, the head narrowly (and abruptly) in front and the labrum testaceous, the prothorax with a small fulvous spot at the sides, the elytra each with an oblong subtriangular sordid yellow patch on the disc below the base and a much smaller and more obscure spot beyond the middle (the anterior spot deeply concave in front); the basal and apical margins of the prothorax narrowly cinereo-pubescent, the pubescence on the rest of the surface partaking of the ground-colour, sparse, and not altogether hiding the punctuation. Head exceedingly convex, the eyes pubescent; palpi testaceous, the last joint of the maxillary pair (♂) piceous, subquadrangular, more than twice as broad as long, deeply excavate on its apical side, and abruptly truncate at the tip; antennæ with the basal four joints testaceous, the others in great part piceous, long and rather slender, joint 3 short and narrow, 4–11 moderately widened, longer than broad, 4–7 the widest and more distinctly serrate than 8–10, 11 fully one and a half times as long as 10; prothorax transverse, very convex, the base deeply bisinuate; elytra convex, narrower than the prothorax, and gradually narrowing from the base; pygidium very long and acuminate, moderately stout, nearly twice the length of the hypopygium; beneath with a little cinereous pubescence at the sides of the ventral segments in front, for the rest blackish-pubescent; legs moderately stout, black, the anterior femora and tibiæ and the middle femora (partly) testaceous, the tibial spurs flavous; the penultimate joint of the four anterior tarsi dilated and excavate; intermediate tibiæ and tarsi equal in length; the inner spur of the posterior tibiæ very elongate.

Length to end of the elytra $3\frac{1}{4}$, to tip of the pygidium 4, millim.; breadth (prothorax) 1 millim. (♂.)

Hab. PANAMA, Taboga Island (*Champion*).

One example. Differs from all the preceding in the form of the last joint of the maxillary palpi in the male. This joint has its apical and lower sides straight and parallel to each other, and is abruptly truncate at the tip; it is articulated at its lower external angle to the third joint. The head is exceedingly convex. The pubescence is sparse, and does not hide the punctuation. *M. fenestrata* has much the facies of the European genus *Stenalia*, Muls. It may have eventually to be separated from the genus *Mordella*; but as *Mordellistena* also contains species with somewhat similarly formed palpi in the male, it is not advisable to separate it. The hind tibiæ are without oblique ridges on their outer face, the subapical one excepted.

595.76

GLIPODES.

Glipodes, Leconte, Proc. Acad. Phil. xiv. p. 47 (1862)[1]; J. B. Smith, Trans. Am. Ent. Soc. x. p. 84 (1882).

Leconte[1] states that "the species of this genus are cuneiform, narrow, fuscous, and covered with a dense sericeous brown pubescence. The scutellum is rounded-triangular; the anal style is moderately long; the hind tibiæ have no subapical ridge (which exists in all the other genera), but are carinate along the dorsal line, and furnished with a long oblique ridge on the outer surface, which is connected with the dorsal ridge near the tip; the first joint of the hind tarsi has two oblique ridges. The eyes are coarsely granulated; the antennæ are feebly serrate. The last joint of the maxillary palpi is scalene-triangular in form, and in the male of *G. sericans* is covered on the under surface with a dense brush of short fine hair; in the same sex there is at the base of the last joint an external *articulated* bifurcated appendage, the branches of which are as long as the joint; no vestige of this is seen in the female; the last joint of the labial palpi of both sexes of *G. sericans* is triangular and broadly emarginate at tip; in *G. helva* the same joint is bell-shaped and truncate at tip." In the single Central-American *Glipodes*, which I refer without hesitation to *G. sericans* (Melsh.), the first, second, and third joints of the hind tarsi have each a single oblique ridge extending to about half the length of the joint (there being no trace of a second ridge on the first joint *), the intermediate tibiæ are (as in *Glipa*) longer than the tarsi of the same pair of legs, and have each a single long spur, and the penultimate joint of the anterior and middle tarsi is dilated and excavate. The middle tibiæ are conspicuously longer than the tarsi of the same pair of legs, a character overlooked by Leconte and also by J. B. Smith.

1. **Glipodes sericans.** (Tab. XIII. figg. 19, ♂; 19 *a*, labium; 19 *b*, maxilla and maxillary palpus.)

Mordella sericans, Melsh. Proc. Acad. Phil. ii. p. 312[1].

Glipodes sericans, Lec. Proc. Acad. Phil. xiv. p. 48[2]; J. B. Smith, Trans. Am. Ent. Soc. x. p. 84, t. 2. fig. 10[3].

Hab. North America, Pennsylvania[1], Middle[2 3], Southern[2 3], and Western States[2]. —Mexico, Tapachula in Chiapas (*Höge*); British Honduras (*Blancaneaux*); Guatemala, El Reposo (*Champion*); Panama, Bugaba (*Champion*).

Of this very widely distributed species we have obtained nine examples from Central America. They differ from the above-cited descriptions in their blacker ground-colour and in having a more or less distinct transverse patch (narrowly divided at the suture) at the base of the elytra, and the disc of the thorax also, blackish-pubescent, the rest

* Dr. Horn has examined one of our specimens, and he informs me that his example of *G. sericans* agrees with it.

of the pubescence being golden-brown. The eyes are densely pubescent. The tibial spurs are testaceous, the inner spur nearly twice as long as the outer one. The third and fourth joints of the antennæ are slender, the fourth longer than the third and much narrower than the fifth.

CONALIA.

Conalia, Mulsant, Ann. Sc. Nat. Lyon, 1858, p. 313; Opusc. Ent. ix. p. 55; Emery, Essai Monogr. sur les Mordellides, in L'Abeille, xiv. p. 73 (1876).

The chief characters given by Mulsant for this genus are :—" Tibias postérieurs sans dent sur leur arête dorsale; rayés sur leur face externe d'une hachure ou d'une ligne, naissant de leur angle postéro-externe et longitudinalement avancée au moins jusqu'à la moitié de la longueur des dits tibias, en s'écartant graduellement un peu du bord externe." This description was taken from a mutilated example (without hind tarsi), from Hungary, and the insect named *C. baudii*. A Central-American species merely differs from the above definition in having the single oblique ridge on the outer face of the hind tibiæ extending to fully three-fourths of their length. In the American insect the first and second joints of the hind tarsi have each a similar ridge to that on the tibiæ; the hind tibiæ (as in *Glipodes*) are without a short subapical ridge, and also without a dorsal carina (this being conspicuous in *Glipodes*); the labial palpi are long and slender, their apical joint very elongate and subacuminate; the lobes of the maxillæ are moderately long, the outer lobe only a very little longer and stouter than the inner one; the last joint of the maxillary palpi is moderately stout, and subcultriform in both sexes; the eyes are finely granulated; the intermediate tibiæ and tarsi are equal in length; the penultimate joint of the four anterior tarsi is very feebly dilated and excavate; the inner spur of the hind tibiæ is very long, more than twice the length of the outer one; the last dorsal segment or pygidium is very short (much shorter than in *C. baudii*, Muls., and only a little longer than in *Cothurus*), broadly conical, very little longer than the hypopygium, and, owing to the curvature of the abdomen, not visible beyond the apex of the elytra.

1. **Conalia ebenina.** (Tab. XIII. figg. 20; 20 *a*, labium; 20 *b*, maxilla and maxillary palpus; 20 *c*, hind leg.)

Moderately elongate, subparallel, black or brownish-black, uniformly clothed with dark brown pubescence. Head regularly convex, very narrowly extended on either side behind the eyes; palpi pitchy-black; antennæ black with the basal joints a little lighter, short, joints 3 and 4 slender, 5–11 moderately dilated, 5–10 subserrate, 5 very much broader than 4, the penultimate joints moderately transverse in the male, strongly so in the female, 11 a little longer than 10; prothorax transverse, deeply bisinuate at the base, the median lobe broadly produced and subtruncate behind, the sides sinuate behind the middle (parallel posteriorly if viewed from above); elytra very little narrower than the prothorax, convex, moderately long; beneath with a little cinereous pubescence at the base of the first ventral segment and on the metasternum, for the rest clothed with dark brown pubescence; pygidium exceedingly short and obtuse, scarcely longer than the hypopygium, not visible from above; legs black, the four anterior femora sometimes a little lighter, the posterior tibial spurs piceous.

Length to end of the elytra 3–3¼, breadth 1–1¼ millim. (♂ ♀.)

Hab. Mexico, Xucumanatlan, Acaguizotla, Chilpancingo, Tierra Colorada, Amula, Teapa (*H. H. Smith*), Tupataro, Jalapa (*Höge*); Nicaragua, Chontales (*Janson*).

Sixteen specimens. One or two only from each locality.

CALYCE.

Head rather broadly extended behind the eyes and at the sides angularly projecting beyond them; the eyes rounded, comparatively small, coarsely granulated; (palpi missing); antennæ with joints 5–10 very broadly dilated and strongly transverse; prothorax short, strongly transverse, with a broad median lobe in front and behind, the basal lobe produced far beyond the hind angles, the latter obtuse; scutellum subtriangular; elytra long, parallel for three-fourths of their length; pygidium very short, broadly conical, very little longer than the hypopygium; the penultimate joint of the four anterior tarsi very feebly dilated and excavate; the intermediate tibiæ and tarsi equal in length; the hind tibiæ and first joint of the hind tarsi with oblique ridges on their outer face, the middle tibiæ with a single long spur; body broad, parallel, rather depressed.

This genus is proposed for a species from the State of Panama *. In the shape of the head, thorax, and pygidium, as well as in general facies, it differs greatly from *Mordellistena*, to which, however, it is very closely allied. The palpi and the apical joint of the antennæ are unfortunately broken off in the single example obtained. The pygidium is shorter than in any species of *Mordellistena*.

1. **Calyce fulva.** (Tab. XIII. figg. 21 ; 21 *a*, antenna.)

Elongate, above and beneath fulvous, thickly clothed with rather coarse similarly-coloured pubescence. Head very broad, somewhat flattened in the centre, and with a short median groove in front, the tips of the mandibles and the eyes black; antennæ rather short, joints 1–3 testaceous, 4 slightly infuscate, 5–10 black (11 missing), 3 and 4 short, 4 much wider than 3, transverse, 5–10 very broadly widened, equal in width; prothorax strongly transverse, broad, rounded at the sides behind, the hind angles obtuse, the median basal lobe rounded and much produced; elytra a little narrower than the prothorax, rather depressed on the disc, long and parallel; legs fulvo-testaceous; the hind tibiæ with five (including the subapical one), the first joint of the hind tarsi with three (the first rudimentary), short, oblique, parallel ridges; the middle tibiæ with a single rather long spur; wings black.

Length to end of the elytra $5\frac{1}{4}$, to tip of the pygidium $5\frac{1}{2}$, millim.; breadth 2 millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

MORDELLISTENA.

Mordellistena, Costa, Faun. Regn. Napol., Mordellid. pp. 16, 31 (1854); Lacordaire, Gen. Col. v. p. 611.

Natirrica, Costa, loc. cit. p. 19.

Tolida, Mulsant, Longipèdes, p. 83 (1856).

Mordellochroa, Emery, Essai monogr. sur les Mordellides, in L'Abeille, xiv. p. 80 (1876).

Mordellistena contains a very large number of species, the majority of which are from the temperate zone of the northern hemisphere. It is very numerously represented in the United States of North America, the species diminishing in number

* In Mr. F. Bates's collection there is a mutilated specimen of a second (larger) species; this example, which is not marked with any locality, is from Dejean's collection, and is labelled "*Ripiphorus* (?) *cardinalis*, mihi."

southwards, the converse being the case in the genus *Mordella*. Mexico and Central America prove to have almost the same number of species as the United States: seventy-five in the former, as against seventy-seven in the latter. Of the seventy-five here enumerated, forty-one occur in Mexico, thirty-four in Guatemala, and sixteen in the State of Panama. Very few species extend from Mexico to Panama, but many are common to Mexico and Guatemala; a considerable number seem to be peculiar to Western Mexico. Twenty-three species only have been recorded as yet from South America—one from Colombia, four from Peru, sixteen from Brazil, and two from Chili; but several of the species of *Mordella* of the older authors belong to it, as *M. ferruginea*, Fabr., from S. America, *M. rubida*, Er., from Peru, &c. One species only has hitherto been described from within our limits. Important sexual characters are to be found in many species of *Mordellistena*, more particularly in the form of the apical joint of the maxillary palpi. In *M. ephippiata*, *M. lineatocollis*, and *M. æquinoctialis*, and also in some very small species, *M. xanthopyga*, *M. palpalis*, *M. perexigua*, &c., this joint is hammer- (or boat-) shaped in the male, and more or less elongate-triangular or oblong-ovate in the female: *M. ephippiata* and its allies agree very nearly with the European *M. abdominalis*, Fabr., a species placed by Emery in his section *Mordellochroa*, though he did not notice the form of the maxillary palpi in the male; *M. xanthopyga*, &c., with the species placed by the same author in his section *Tolida*. The apical joint of the maxillary palpi is often a little longer in the male than in the female, in some cases being stouter and more angular, and in others more cultriform, in the first-mentioned sex; the second joint in several species is considerably stouter in the male than in the female. In the males of *M. distorta* and *M. curvimana* the anterior tibiæ are broadly dilated and flattened, and the first joint of the anterior tarsi is bowed inwards and much elongated. In the male of *M. sexmaculata* the eight outer joints of the antennæ are thickened and much elongated, the fourth and fifth being equal; in the female of the same species the fourth joint is small and subequal with the third, the fifth being more than twice as long as, and very much stouter than, the fourth. The number and position of the ridges on the hind tibiæ and on one or more of the hind tarsal joints is also a very useful character in discriminating the numerous species; but American authors have placed far too much reliance upon the exact number of these ridges. Amongst a long series of examples of some species an additional, often short or rudimentary, ridge (or two) is to be found in advance of the others on the tibiæ or tarsal joints of one or more specimens, the additional ridge (or ridges) not always being symmetrical on both legs; in *M. murina* &c. the ridges vary in number from 3–5 on the tibiæ and first tarsal joint. In a number of species (as in many from the United States) the anterior ridge on the hind tibiæ is obliquely extended across their outer face to near the base, this character easily distinguishing several very closely allied forms. In two Mexican species undoubtedly belonging to this genus, *M. fasciculata* and *M. festiva*, the hind tibiæ have only a subapical ridge (as in

Mordella); but rudimentary or subobsolete ridges are present on some of the hind tarsal joints.

In J. B. Smith's monograph of the North-American species (Trans. Am. Ent. Soc. x. pp. 85–98), and in that of Leconte (Proc. Acad. Phil. xiv. pp. 48–50), the form of the antennæ and palpi is not even noticed in the descriptions; the first-mentioned author states (*loc. cit.* p. 85) that "there appear to be no external sexual peculiarities."

The subapical ridge of the hind tibiæ is counted with the others in the following descriptions.

The annexed table will assist in the identification of the Central-American species; but it must be remembered that some of them are described from the female sex only and their position may be incorrectly given:—

Hind tibiæ with from two to six oblique ridges.
- The basal three joints of the hind tarsi with oblique ridges.
  - Apical joint of the maxillary palpi very dissimilar in shape in the two sexes—hammer-shaped in the male, elongate-triangular in the female . . . . . Species 1–4.
  - Apical joint of the maxillary palpi not very dissimilar in shape in the two sexes.
    - Antennæ not much longer in the male than in the female; joint 4 shorter and narrower than 5 in both sexes; hind tibiæ with three or four ridges . . . . . Species 5–10.
    - Antennæ greatly elongated in the male, joints 4 and 5 equal in this sex; hind tibiæ with five ridges . . . . . Species 11.
- The basal two joints of the hind tarsi with oblique ridges.
  - The ridges on the hind tibiæ (the subapical one excepted) subequal.
    - Apical joint of the maxillary palpi more or less triangular, securiform, or cultriform in both sexes, in some species shorter and narrower in the female.
      - Fourth antennal joint in the male very much longer and stouter than the third, nearly or quite equalling the fifth, the antennæ themselves sometimes considerably elongated in this sex; the hind tibiæ with five or six ridges . . . Species 12–16.
      - Fourth antennal joint in the male very much stouter than the third, shorter than but nearly as wide as the fifth; the hind tibiæ with five ridges . . . . . Species 17.
      - Third and fourth antennal joints subequal; the fourth sometimes a little longer or stouter than the third in the male, but distinctly smaller than the fifth.
        - Hind tibiæ with six ridges . . . . . Species 18.
        - Hind tibiæ with from 3–5 ridges . . . . . Species 19–50.
    - Apical joint of the maxillary palpi narrowly ovate, not at all truncate at the apex; antennæ with the fourth and fifth joints subequal . . . . . Species 51.

The anterior or second ridge on the hind tibiæ extending across their outer face to near the base.
Apical joint of the maxillary palpi more or less triangular or cultriform in both sexes, in some species shorter in the female.
Hind tibiæ with four ridges . . . . . Species 52.
Hind tibiæ with three ridges.
Anterior tibiæ not flattened in the male. . . . . Species 53–61.
Anterior tibiæ broadly dilated and flattened in the male. Species 62, 63.
Apical joint of the maxillary palpi hammer-shaped in the male, elongate-ovate with the apex obliquely truncate in the female . . . . . Species 64.
The basal joint only of the hind tarsi with oblique ridges; the hind tibiæ with two or three ridges.
The ridges on the hind tibiæ very short, subequal.
Apical joint of the maxillary palpi more or less triangular or ovate in both sexes . . . . . Species 65–68.
Apical joint of the maxillary palpi hammer-shaped in the male, elongate-ovate with the apex truncate in the female . . . . Species 69–72.
The anterior ridge on the hind tibiæ extending across their outer face; apical joint of the maxillary palpi hammer-shaped in the male . . Species 73.
Hind tibiæ with a single subapical ridge only; the basal one or two joints of the hind tarsi with faint or subobsolete ridges . . . . . Species 74, 75.

1. **Mordellistena ephippiata.** (Tab. XIII. figg. 22, ♂; 22 *a*, maxillary palpus.)

Moderately elongate, robust, cuneiform, fulvous; the eyes and the tips of the mandibles black; the palpi testaceous; the elytra with a common broad fascia just beyond the middle (extending upwards along the epipleuræ towards the base, and partly divided at the suture behind) and the scutellar region, indeterminately, piceous; the pubescence dense and partaking of the ground-colour. Head slightly depressed in the middle behind, the eyes rather small; last joint of the maxillary palpi (♂) exceedingly large, more than twice as broad as long, hammer-shaped (its apical side convex, deeply excavate within, its inner side concave, the tip rounded); antennæ (♂) testaceous, short, rather stout, filiform, joints 3 and 4 short, narrow, about as broad as long, 5 very much wider than, and nearly twice as long as 3, 5–10 about equal in length but decreasing in width, all longer than broad, 11 oblong ovate, a little longer than 10; prothorax transverse, the base with a few dark hairs in the middle; elytra convex, moderately long, narrower than the prothorax; pygidium long and rather slender, more than twice the length of the hypopygium; beneath entirely fulvous; legs moderately stout, reddish-testaceous, the ridges on the hind pair black; the hind tibiæ with three oblique ridges (the first and second very long, the third shorter and subapical); the first joint of the hind tarsi with three, the second and third joints each with two, oblique ridges.

Length to end of the elytra 4, to tip of the pygidium 5, millim.; breadth 1½ millim. (♂.)

Hab. GUATEMALA, Zapote (*Champion*).

One male example. Easily distinguished from all the other Central-American species by the broadly fasciate elytra and fulvous colour, and by the exceedingly large, curved, hammer-shaped apical joint of the maxillary palpi in the male sex. The head,

when viewed in certain lights, has an opalescent lustre. The middle tibiæ are without spurs, but they may be broken off.

2. **Mordellistena lineatocollis.** (Tab. XIII. figg. 23, ♀; 23 *a*, antenna, ♀; 23 *b*, maxillary palpus, ♀; 24, maxillary palpus, ♂.)

Elongate, robust, cuneiform; the head rufous, with a large broad black patch in the middle behind, and with coppery and violaceous reflections in certain lights; the prothorax fulvous, with a black median vitta extending from the base to the apex, but narrowing in front; the scutellum piceous; the elytra black (violaceous when the pubescence is removed); the pygidium obscure reddish-yellow, infuscate at the tip; the pubescence dense, on the elytra and on the median vitta of the prothorax black, and on the head and scutellum yellowish-cinereous, that on the rest of the prothorax and on the pygidium partaking of the ground-colour. Head slightly depressed in the middle behind; the eyes black; palpi piceous, the last joint of the maxillary pair differing greatly in shape in the two sexes—(♂) about three times as broad as long, a little curved, and somewhat hammer-shaped, the apical and inner sides almost parallel, the tip obliquely truncate, the apical side deeply excavate within—(♀) stout, scalene-triangular; antennæ black, the two basal joints obscurely rufous in one specimen, moderately stout in the male, very stout in the female, joints 3 and 4 short, 3 narrow, 4 subtriangular, wider than 3, about as broad as long, 5 nearly twice as long and twice as broad as 4, 5–10 gradually decreasing in width, but equal in length, all longer than broad, 11 oblong-ovate, longer than 10; prothorax much broader than long; elytra convex, elongate, narrowing from the base; beneath with the head, the prothorax, the posterior coxæ in the middle, and the last ventral segment reddish-yellow, for the rest black, the pubescence along the middle of the venter and at the sides of the segments in front yellowish-cinereous, for the rest partaking in great part of the ground-colour; pygidium very long, rather slender, more than twice the length of the hypopygium; legs piceous, the hind pair lighter in colour, the four anterior femora obscure testaceous, the tibial spurs testaceous; the hind tibiæ with three long oblique ridges and a shorter subapical one; the first joint of the hind tarsi with three, the second and third joints each with two, long oblique ridges; the middle tibiæ with a single long fine spur.

Length to the end of the elytra 4–6, to tip of the pygidium $5\frac{1}{2}$–$7\frac{1}{2}$, millim.; breadth $1\frac{1}{2}$–2 millim. (♂ ♀.)

Hab. GUATEMALA, Panima and San Juan in Vera Paz (*Champion*).

Two specimens only. Somewhat allied to the European *M. abdominalis*, Fabr.; but similar in colour in the two sexes, and with the antennæ very differently formed. These organs, as in *M. æquinoctialis*, are stouter in the female than in the male, and the fifth joint is the stoutest in both sexes. When denuded of the black pubescence, the elytra and the median vitta of the thorax are metallic violaceous. The first of the three long ridges on the hind tibiæ might be almost described as a dorsal carina, it being placed almost on the outer edge of the tibia.

3. **Mordellistena æquinoctialis.** (Tab. XIII. figg. 25, ♂; 25 *a*, antenna, 25 *b*, maxillary palpus, 25 *c*, hind leg, ♂; 26, antenna, 26 *a*, maxillary palpus, ♀.)

Elongate, rather broad, robust, subparallel, the female more cuneiform; varying in colour from obscure castaneous to blackish-brown; the prothorax in both sexes usually reddish or obscure testaceous, with a large oblong blackish patch on the middle of the disc, and a smaller patch on either side towards the lateral margin—these markings sometimes connected and more or less surrounding a transverse patch of the ground-colour on each side of the base; the pygidium reddish or obscure castaneous; the pubescence dense, in great part partaking of the ground-colour, but often more or less golden-brown on the apical fourth of the elytra (in rare examples the apical patch is extended a short distance up the suture, or an ill-defined broad oblique stripe extending from the shoulders inwards is golden-brown-pubescent). Head

regularly convex, the eyes very large; palpi testaceous, with the last joint of the maxillary pair darker, the latter differing greatly in shape in the two sexes—(♂) nearly three times as broad as long, a little curved, and somewhat hammer-shaped, the apical and inner sides almost parallel, the tip obliquely truncate, the apical side deeply excavate within—(♀) elongate-triangular, with the angles rounded, the inner side not very much shorter than the outer side, the apical side only about half the length of the latter; antennæ varying in colour from testaceous to piceous with the two basal joints paler—(♂) moderately stout, joints 3 and 4 short, 3 narrow, subtriangular, 4 wider than 3, fully as broad as long, 5 very much broader than and more than twice as long as 4, 6 narrower and a little shorter than 5, 6–10 gradually decreasing in width, about equal in length, all considerably longer than broad, 11 elongate-ovate, longer than 10—(♀) shorter, much stouter, and more tapering, joints 5–10 rapidly decreasing in width, 5 very thick, 6 and 7 as broad as long, 8–10 rather longer than broad, 11 a little longer than 10; prothorax much broader than long; elytra elongate, convex, more parallel in the male than in the female; beneath (the prothorax excepted) usually in great part piceous, with the apex of each ventral segment reddish; pygidium rather slender, very long in the male, shorter in the female, in the male nearly two and a half times, in the female twice, the length of the hypopygium; legs piceous or brownish, with the four anterior femora usually, and the tibial spurs, testaceous; the hind tibiæ with two long oblique ridges and a shorter subapical one, and a long faint subdorsal ridge towards the base; the first joint of the hind tarsi with three, the second and third joints each with two, long oblique ridges; the middle tibiæ with a single long fine spur.

Length to end of the elytra 4–5½, to tip of the pygidium 5–6⅓, millim.; breadth 1⅓–1⅔ millim. (♂ ♀.)

Hab. Guatemala, Capetillo, Teleman, Senahu (*Champion*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Numerous examples of both sexes. This is one of a little group of closely-allied Central-American species. It has the fifth joint of the antennæ very stout, and the fourth short in both sexes, these organs themselves being much thicker and more tapering in the female than in the male. The last joint of the maxillary palpi in the male is formed as in *M. lineatocollis*; but this joint in the female is more elongate, and not so broad as in that insect, with the angles more rounded. The median patch on the disc of the thorax is distinct in all the specimens, but in two examples the lateral marks are obsolete. The pubescence on the apical fourth of the elytra is usually golden-brown. The hind tibiæ have in addition to the three well-marked oblique ridges a long fine ridge near the base (only visible when the tibia is detached or viewed in a particular way), this latter being less distinct than in *M. lineatocollis*.

4. **Mordellistena valens.** (Tab. XIII. fig. 27, ♀.)

Elongate, broad, robust, cuneiform; the head castaneous or reddish-yellow, darker in front, the eyes black, the prothorax luteous, the scutellum and elytra pitchy-brown, the elytra paler at the base and beyond the middle, the pygidium reddish; the elytra with nearly the apical half, an interrupted fascia before the middle (formed by oblique lines of pubescence), and some lines at the base golden-brown-pubescent, the pubescence on the rest of the elytra blackish-brown, that on the prothorax and scutellum partaking of the ground-colour. Head regularly convex; palpi (♀) testaceous or pitchy-brown, the last joint of the maxillary pair elongate, moderately stout, scalene-triangular, with the angles somewhat rounded; antennæ (♀) similar in colour to the palpi, moderately stout, subfiliform, joints 3 and 4 small, rather longer than broad, 4 a little wider than 3, 5 about twice as long and twice as wide as 4, 5–10 decreasing in width, all considerably longer than broad, 11 slightly longer than 10; elytra elongate, narrowing almost from the base; pygidium (♀) very long and pointed, more than twice the length of the hypopygium; beneath with the metasternum, the posterior coxæ, and the base of each ventral segment piceous,

for the rest reddish; legs testaceous or reddish testaceous, the dorsal edge of the hind tibiæ and tarsi piceous; hind tibiæ and tarsi with the ridges as in *M. æquinoctialis*; the middle tibiæ with a single long fine spur.
Length to end of the elytra 5, to tip of the pygidium 6, millim.; breadth $1\frac{3}{4}$ millim. (♀.)

Hab. PANAMA, Bugaba (*Champion*).

Two female examples. Very close to *M. æquinoctialis*, from the corresponding sex of which it differs as follows:—The antennæ are longer, more slender, and less tapering (resembling those of the male of that species), and have their joints 5–10 all considerably longer than broad; the last joint of the maxillary palpi is wider and more angular; the thorax is luteous; the elytra have an interrupted antemedian fascia, as well as more than the apical third, golden-brown-pubescent; the pygidium is longer (as long as in the male of *M. æquinoctialis*); and the body is stouter, broader, and more cuneiform.

5. **Mordellistena castaneicolor.** (Tab. XIV. figg. 1, ♀; 1 *a*, maxillary palpus.)

Elongate, robust, cuneiform, castaneous, clothed with golden-brown-pubescence, the eyes and the tips of the mandibles black. Head regularly convex, the eyes very large; maxillary palpi (♀) testaceous, the apical joint castaneous, the latter elongate, rather stout, scalene-triangular; antennæ (♀) testaceous, comparatively slender, joints 3 and 4 narrow, longer than broad, subequal, 5–10 moderately widened, subserrate, about equal in length but slightly decreasing in width, all considerably longer than broad, 5 very much longer than 4, 5 and 6 almost equal, 11 longer than 10; prothorax transverse; elytra long and convex, gradually narrowing from the base; beneath castaneous, the breast slightly darker; pygidium conical, moderately long, twice the length of the hypopygium; legs testaceous, the dorsal edge of the hind pair piceous; the hind tibiæ with two long oblique ridges and a shorter subapical one, and a long fine subdorsal ridge towards the base; the first joint of the hind tarsi with three, the second and third joints each with two, long oblique ridges; the middle tibiæ with a single long fine spur.
Length to end of the elytra $5\frac{1}{4}$, to tip of the pygidium 6, millim.; breadth $1\frac{3}{4}$ millim. (♀.)

Hab. PANAMA, David in Chiriqui (*Champion*).

One female example. Allied to *M. æquinoctialis* and *M. valens*, but with the antennæ much more slender, and the apical joint of the maxillary palpi stouter than in the females of these species; the antennal joints 5–10 are subserrate, and the fifth and sixth are almost equal (the fifth scarcely stouter than the sixth); the pygidium is shorter than in the females of *M. valens*. The apical joint of the maxillary palpi is almost as stout as in *M. lineatocollis* (♀), but it is more elongate. The pubescence is uniformly golden-brown. The eyes are very large.

6. **Mordellistena veræpacis.**

Elongate, robust, cuneiform, castaneous, clothed with golden-brown-pubescence, the eyes and the tips of the mandibles black. Head regularly convex; maxillary palpi (♀) obscure testaceous, the apical joint piceous, the latter short and stout, broadly triangular, its apical and inner sides about equal in length, both much shorter than the outer side; antennæ (♀) piceous with the two basal joints testaceous, moderately stout, short, joints 3 and 4 short, 3 narrow, 4 as broad as long, 5 very much wider than and nearly twice as long as 4, 5–10 slightly decreasing in width, all about as broad as long, 11 longer than 10; prothorax, elytra, pygidium, and legs as in *M. castaneicolor*; beneath castaneous, the posterior coxæ and metasternum piceous.
Length to end of the elytra 4, to tip of the pygidium 5, millim.; breadth $1\frac{1}{2}$ millim. (♀.)

Hab. GUATEMALA, Teleman (*Champion*).

One female example from the Polochic valley. Exceedingly like the same sex of *M. castaneicolor*, and only separable therefrom by the very different form of the palpi and antennæ. In the shape of the antennæ the present insect approaches *M. æquinoctialis* (♀), from which it may be at once distinguished by the much shorter and broadly triangular shape of the apical joint of the maxillary palpi. The fifth antennal joint, as in *M. æquinoctialis*, &c., is distinctly stouter than the sixth; in *M. veræpacis* joints 5–10 are much shorter and stouter than they are in *M. castaneicolor* (♀). A single specimen from San Juan, Vera Paz, is perhaps a small male of the same species; it has the pygidium much longer, and each elytron marked with an arcuate indistinct dark brown fascia about the middle; the antennæ are unfortunately broken off.

7. **Mordellistena vafer.**

Elongate, robust, cuneiform; the head piceous in front, obscure castaneous behind, the labrum testaceous, the prothorax castaneous, with the disc largely suffused with piceous, the elytra blackish-brown, with the shoulders indeterminately castaneous, the pygidium piceous, reddish at the base and tip; the sides of the prothorax and of the elytra and the suture with a little golden-brown pubescence, the pubescence on the rest of the surface partaking of the ground-colour. Head regularly convex; palpi (♀) testaceous, the last joint of the maxillary pair infuscate, the latter rather stout, elongate-triangular, with the angles rounded; antennæ (♀) pitchy-brown with the two basal joints testaceous, moderately stout, subfiliform, joints 3 and 4 small, equal in length, longer than broad, 4 wider than 3, 5 nearly twice as long as and much broader than 4, 5–10 subequal, longer than broad, 6 not quite so stout as 5, 11 a little longer than 10; prothorax transverse; elytra elongate, gradually narrowing from the base; beneath castaneous, the breast piceous; pygidium moderately long and comparatively stout, twice the length of the hypopygium, blunt at the tip; legs testaceous, the hind pair reddish with the dorsal edge black; the hind tibiæ with two long very oblique ridges and a shorter subapical one, and a faint subdorsal ridge towards the base; the first joint of the hind tarsi with three, the second and third joints each with two, long, oblique ridges.

Length to end of the elytra 4, to tip of the pygidium $4\frac{3}{4}$, millim.; breadth $1\frac{1}{3}$ millim. (♀.)

Hab. PANAMA, Tolé (*Champion*).

One female example. Very similar to *M. æquinoctialis* (♀); but with the last joint of the maxillary palpi stouter, the antennæ more slender and subfiliform, the pygidium stouter and less pointed at the tip, and the suture narrowly golden-brown-pubescent. The last joint of the maxillary palpi is more ovate in shape than in the same sex of *M. valens*, *M. castaneicolor*, or *M. veræpacis*; the antennæ are almost as slender as in *M. castaneicolor* (♀), but joints 5–11 are not so elongate. In the form of the antennæ the insect is most closely allied to *M. valens*.

8. **Mordellistena bicarinata.**

Moderately elongate, cuneiform, ferruginous or flavo-ferruginous, the elytra a little darker, the pubescence uniform and partaking of the ground-colour. Palpi testaceous or fusco-testaceous, the last joint of the maxillary pair elongate, scalene-triangular; antennæ testaceous, or fusco-testaceous with the basal four joints paler, filiform, slender, moderately long, joint 3 thin, 4 longer and stouter than 3, 5–10 elongate, about equal in length, 5 a little longer and stouter than 4; prothorax transverse; elytra gradually narrowing from the base; beneath coloured as above; pygidium very long and slender, two and a half

times the length of the hypopygium; legs testaceous, the hind pair a little darker; the hind tibiæ with two rather long, very oblique, ridges and a short subapical one: the first joint of the hind tarsi with three, the second and third joints each with two, short, oblique ridges.

Length to end of the elytra 3–3½, to tip of the pygidium 3⅔–4⅔, millim.; breadth 1–1¼ millim.

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Two examples, probably male and female, one of them having the antennæ shorter and more slender, and the fourth joint a little shorter, than in the other. Less elongate than *M. gracilicornis*, the pygidium longer and more slender, the hind tibiæ with two long, very oblique, ridges and a short subapical one (instead of five short parallel ones). The shorter, broader, and more cuneiform shape, &c., distinguish it from the other similarly-coloured *Mordellistenæ* here described.

9. **Mordellistena callens.**

Rather short and robust, cuneiform, black or pitchy-brown, the mouth-parts testaceous; the pubescence sericeous-brown, uniform. Head large, very broad; maxillary palpi pitchy-brown or obscure testaceous, stout, the last joint broad-ovate with the apex very obliquely truncate; antennæ pitchy-brown with the basal joints paler, rather short, joints 3 and 4 narrow, subequal, 5–11 moderately thickened, 5–10 subequal, a little longer than broad, 5 much longer and stouter than 4, 11 longer than 10; prothorax transverse; elytra rather short, narrowing from the base; beneath black, the apical margins of the ventral segments obscure testaceous; pygidium long and moderately stout, more than twice the length of the hypopygium; legs testaceous or brownish, the hind pair darker; the hind tibiæ with three oblique ridges—the first and second long, extending partly across the outer face of the tibia, parallel, equal, the third (subapical) short; the first joint of the hind tarsi with three, the second and third joints each with two, oblique, parallel ridges.

Length to end of the elytra 3–3⅓, to tip of the pygidium 3⅔–4⅓, millim.; breadth 1–1¼ millim.

Hab. Mexico, Vera Cruz (*Sallé*), Atoyac in Vera Cruz (*H. H. Smith*); Guatemala, Senahu (*Champion*); Nicaragua, Chontales (*Janson*).

Five examples, apparently including both sexes. From *M. valens* and its allies this species may be known by its less elongate shape and much smaller size, and by the first and second carinæ of the hind tibiæ being extended partly across their outer face (instead of being placed one behind the other just below the dorsal edge). From *M. instabilis*, var. *η*, the position and number of the carinæ on the hind tibiæ (two of these being elongated in *M. callens*) sufficiently distinguish it; the third hind tarsal joint of the former is without carinæ.

10. **Mordellistena isthmica.** (Tab. XIV. fig. 2.)

Comparatively short, cuneiform, black, the mouth-parts testaceous, the elytra with an oblique rather broad flavo-testaceous stripe extending from the shoulders almost to the middle and a longitudinal obscure testaceous stripe extending from a little below this to the apex (these markings forming an interrupted dorsal stripe on each elytron), the pygidium black, obscurely reddish towards the apex; the pubescence yellowish-cinereous on the elytral markings, for the rest blackish, that on the prothorax and head partly cinereous. Head broad, short; palpi testaceous, the last joint of the maxillary pair darker, the latter not very stout, elongate-ovate, with the apex abruptly truncate, the apical side very much shorter than the inner side; antennæ rather short, obscure testaceous, with the basal joints paler, joints 3 and 4 short, narrow, subequal, 5–11 moderately thickened, 5–10 gradually decreasing in length and width, subserrate,

not much longer than broad, 5 nearly twice as long as, and very much wider than, 4; prothorax transverse; elytra rather short, gradually narrowing from the base; beneath black, the middle of the breast and the apex of each ventral segment testaceous; pygidium comparatively short, rather stout, conical, twice the length of the hypopygium; legs testaceous, the hind pair a little darker; the hind tibiæ with three oblique parallel ridges—the first extending more than halfway across the outer face of the tibia, the third short; the first joint of the hind tarsi with three or four, and the second and third joints each with two, oblique ridges.

Length to end of the elytra $2\frac{1}{2}$–$3\frac{1}{8}$, to tip of the pygidium $3\frac{1}{3}$–4, millim.; breadth $\frac{7}{8}$–$1\frac{1}{8}$ millim. (♀.)

Hab. Panama, San Lorenzo, Tolé (*Champion*).

Two examples. This species resembles the typical form of *M. mutabilis* in its elytral markings, but it is shorter and broader, and has a more transverse head and thorax, and a much shorter and stouter pygidium; the ridges on the hind legs extend on to the third tarsal joint; the last joint of the maxillary palpi is stouter, more abruptly truncate at the apex. In the larger example there is an additional (finer) ridge in front of the others on the dorsal edge of the hind tibiæ.

11. **Mordellistena sexmaculata.** (Tab. XIV. figg. 3, ♂; 3 *a*, antenna, ♂; 4, ♀, var.; 4 *a*, antenna, ♀.)

Moderately elongate, robust, cuneiform; the head and prothorax flavo- or reddish-testaceous, the former (when viewed laterally or from behind) with a more or less brilliant opalescent lustre, the eyes black, the prothorax with indications of a very faint oblong median patch and a large spot on either side of it, the median patch in one example piceous (violaceous in certain lights); the scutellum and elytra piceous, or black with a violaceous lustre, the elytra each with a large oblique patch just below the shoulders extending inwards, but not nearly reaching the suture, a broad transverse fascia or rounded spot at the middle, and a similar mark immediately before the apex (neither of which quite reach the suture) flavo-testaceous; the pygidium flavous or reddish to about the middle, darker beyond; the pubescence on the dark parts of the elytra black, for the rest partaking of the ground-colour. Head convex; palpi testaceous or flavous, the last joint of the maxillary pair moderately long, scalene-triangular, with the angles somewhat rounded, similar in both sexes; antennæ piceous or pitchy-brown, with the four basal joints testaceous, very differently formed in the two sexes—(♂) filiform, exceedingly elongate, fully as long as the elytra, joint 3 slender, about as broad as long, 4–11 very elongate, gradually increasing in length and decreasing in width, the penultimate joints about two and a half times as long as broad, 11 longer than 10—(♀) one third shorter, joints 3 and 4 slender, 4 slightly wider and only a little longer than 3, 5–11 almost equal in length, 5 very much longer and wider than 4, the penultimate joints twice as long as broad; prothorax transverse; elytra moderately long, gradually narrowing behind; beneath entirely flavo-testaceous, or testaceous with the sides of the metasternum, posterior coxæ, and ventral segments, to a greater or less extent, piceous; pygidium slender and very elongate in both sexes, two and a half times the length of the hypopygium; legs testaceous, the dorsal edge of the hind pair darker; the hind tibiæ with five (including the subapical one), the first joint of the hind tarsi with four, and the second and third joints each with two (those on the third very faint), short, oblique, parallel ridges.

Length to end of the elytra $3\frac{1}{4}$–4, to tip of the pygidium $4\frac{1}{4}$–5, millim.; breadth 1–$1\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*); Guatemala, Chacoj and Panima in Vera Paz (*Champion*).

Three examples from Mexico (two females and one male), and two (both females) from Guatemala, all from the lower part of the Atlantic slope. The antennæ are very elongate in the male, and their fourth and fifth joints are differently shaped in the two

sexes. The palpi and pygidium are similarly formed in the male and female. The Guatemalan specimens have their under surface darker in colour than those from Mexico, and one of them has a well-defined dark vitta on the disc of the thorax; these examples also have the opalescent lustre on the head much more distinct. The ground-colour of the elytra is apparently dull piceous or black, but when the pubescence is removed the surface is shining and has a metallic violaceous lustre. *M. hexastigma* is very similar in colour, but it has differently formed palpi and antennæ and a shorter pygidium.

12. **Mordellistena crassipyga.** (Tab. XIV. figg. 5; 5 *a*, antenna; 5 *b*, hind leg.)

Elongate, robust, rather broad, cuneiform, black; the head, the prothorax in front and at the base, the scutellum, the elytra with the extreme base, a large oblique postmedian spot on the disc, the suture very narrowly to about the middle, and the apices, yellowish-cinereous-pubescent, the rest of the pubescence on the elytra purplish-black, and that on the prothorax brown. Head moderately convex; palpi reddish-testaceous, the last joint of the maxillary pair darker, the latter elongate, scalene-triangular, its outer side straight; antennæ long and filiform, pitchy-black with the four basal joints reddish-testaceous, joint 3 slender, 4–11 thickened, almost equal in width but slightly decreasing in length, 4 about twice the length and nearly twice the width of 3, the penultimate joints twice as long as broad; prothorax transverse; elytra long, gradually narrowing from the base; beneath black, the sides of the breast and the extreme base of the first and second ventral segments with some yellowish-cinereous pubescence; pygidium stout, broad at the base, conical, short, twice the length of the hypopygium; legs piceous, the anterior femora and the anterior and intermediate tibiæ partly testaceous, the hind tibial spurs testaceous; the hind tibiæ with six (including the subapical one), the first joint of the hind tarsi with five, and the second joint with two, short, oblique, parallel ridges.

Length to end of the elytra $4\frac{1}{2}$, to tip of the pygidium 5, millim.; breadth $1\frac{1}{2}$ millim.

Hab. Mexico, Chilpancingo in Guerrero (*H. H. Smith*).

One example. Very close to *M. forticornis*, of which I at first supposed it to be the female. In the females of the allied *M. sexmaculata* (which has similarly formed antennæ in the male) the fourth antennal joint is short and very little larger than the third; in *M. crassipyga* the fourth and fifth joints are thickened, elongate, and equal (as in the male of *M. forticornis*), and to judge from analogy the specimen described is a male. It has the antennæ much shorter and more slender than in *M. forticornis* (♂); the elytra are without an oblique post-basal pubescent fascia; and the pygidium is much shorter and stouter.

13. **Mordellistena forticornis.** (Tab. XIV. figg. 6, ♂; 6 *a*, maxillary palpus.)

Elongate, cuneiform, black; the head, the prothorax at the sides and base, the scutellum, the elytra with the extreme base, an oblique stripe extending from the shoulders inwards but not quite reaching the suture, an oblique patch on the disc a little beyond the middle (widening inwardly and not reaching the suture), the apices, and the suture narrowly from the base nearly to the apex, yellowish-cinereous-pubescent, the rest of the pubescence on the elytra purplish-black and that on the prothorax brown. Head moderately convex; palpi (♂) testaceous, the last joint of the maxillary pair very elongate, rather narrow, scalene-triangular; antennæ (♂) pitchy-black with the three basal joints testaceous, very elongate, filiform,

joint 3 long and slender, 4–11 comparatively stout, 4 and 5 equal, each about twice as long and more than twice as wide as 3, 5–10 gradually increasing in length but decreasing in width, the penultimate joints two and a half times as long as broad; prothorax transverse; elytra elongate, gradually narrowing from the base; beneath black, the sides of the breast and the base of each ventral segment with some yellowish-cinereous pubescence; pygidium (♂) moderately long, rather stout, twice the length of the hypopygium; legs piceous, the anterior femora and tibiæ, the knees of the intermediate pair, and the hind tibial spurs testaceous; the hind tibiæ with six (including the subapical one, the basal one abbreviated), the first joint of the hind tarsi with four, and the second joint with two, short, oblique, parallel ridges.

Length to end of the elytra $3\frac{2}{3}$, to tip of the pygidium $4\frac{1}{2}$, millim.; breadth $1\frac{1}{3}$ millim. (♂.)

Hab. Mexico, Chilpancingo in Guerrero (*H. H. Smith*).

One male example. Easily recognizable amongst its allies by the very long and comparatively stout antennæ in the male sex, the fourth and fifth joints equal in size; the last joint of the maxillary palpi is elongate and rather narrow, and has its outer side concave. The first ridge on the hind tibiæ is very short; the corresponding ridge on the first hind tarsal joint is distinct on one leg and obliterated on the other.

14. **Mordellistena rufonotata.** (Tab. XIV. fig. 7, ♂.)

Elongate, cuneiform, rather narrow, above and beneath black, the elytra with a large reddish spot at the shoulders; the suture very narrowly, and a narrow line along each elytron at the sides, to about one third from the apex, yellowish-cinereous-pubescent, the prothorax with the basal margin narrowly, and an interrupted line along either side of the disc, similarly pubescent, the rest of the pubescence partaking of the ground-colour. Head large, broad; palpi testaceous, the last joint of the maxillary pair piceous at the tip, the latter (♂) moderately long, stout, scalene-triangular; antennæ (♂) black with the basal three joints a little lighter, very elongate, stout, joint 3 short, narrow, 4–11 much thickened, 4–10 subequal, very much longer than broad, 11 longer than 10; prothorax strongly transverse; elytra moderately long, narrowing from the base; pygidium elongate (the apical half broken off); legs comparatively stout, black, the tibial spurs testaceous; the hind tibiæ with five, the first joint of the hind tarsi with four, the second joint with two, short, faint, parallel, oblique ridges.

Length to end of the elytra 4, breadth $1\frac{1}{3}$, millim. (♂.)

Hab. Mexico, Jalapa (*Höge*).

One male example. This species has the antennæ (♂) stout and very elongate, and formed as in *M. forticornis* and *M. opalescenticeps*, the fourth joint being equal in length and breadth to the fifth; it has the last joint of the maxillary palpi shaped as in the latter. *M. rufonotata* is not closely allied to any other *Mordellistena* here described. The hind tibiæ and the first two joints of the hind tarsi have numerous very short faint parallel ridges; and in addition to those mentioned above there are traces of others on the basal portion of the tibia and of the first tarsal joint.

15. **Mordellistena gracilicornis.** (Tab. XIV. figg. 8, ♂; 8 *a*, maxillary palpus, ♂; 8 *b*, hind leg.)

Elongate, subcuneiform, castaneous or rufo-luteous, the elytra usually with a large triangular common basal patch, two very oblique fasciæ of variable extent on the disc, and an anteapical spot piceous, these markings in some examples completely obliterated; the pubescence yellowish-cinereous, blackish-brown on the elytral markings. Palpi testaceous, the last joint of the maxillary pair moderately long, scalene-

triangular, its inner and apical sides about equal in length in the male, unequal in the female; antennæ testaceous, slender, elongate, subfiliform—(♂) joint 3 short, 4 stouter than and twice as long as 3, 4–10 elongate, subequal—(♀) joint 4 longer but very little stouter than 3, 5–10 subequal; prothorax transverse; elytra elongate, very gradually narrowing from the base; beneath coloured as above, the breast sometimes infuscate; pygidium elongate, a little shorter in the female, twice the length of the hypopygium; legs reddish-testaceous, the hind pair darker; the hind tibiæ with five, the first joint of the hind tarsi with four, and the second joint with two, oblique, parallel ridges.

Length to end of the elytra $3\frac{1}{2}$–4, to tip of the pygidium $4\frac{1}{2}$–5, millim.; breadth $1\frac{1}{8}$–$1\frac{1}{3}$ millim. (♂ ♀.)

Hab. GUATEMALA, Cerro Zunil, Mirandilla, Panajachel (*Champion*).

Six examples—one pair from each of the first-mentioned localities, two females from Panajachel; the description is made from the former. The two Panajachel females differ from the others of the same sex in having the third and fourth antennal joints subequal. A narrower and less robust species than *M. castaneicolor* and its allies; the antennæ elongated in the male and much more slender, the pygidium more slender. From *M. instabilis* in all its varieties, some of which have the elytra very similarly marked, the more elongate shape and the long and slender antennæ sufficiently distinguish it.

16. **Mordellistena opalescenticeps.** (Tab. XIV. figg. 9, ♂; 9 *a*, antenna.)

Moderately elongate, rather robust, cuneiform, black, the head with a brilliant opalescent lustre; the head, the prothorax with the base and apex laterally, and the sides indeterminately, the scutellum, the elytra with a short oblique stripe extending from the shoulders inwards but not reaching the suture, a broad transverse fascia a little beyond the middle (not quite reaching the suture or lateral margin, slightly excised in front and behind, and widening a little outwardly), the suture narrowly thence to the base, and a large spot at the apex of each (not quite reaching the suture), and the base of the pygidium, yellowish-cinereous-pubescent, the rest of the pubescence brownish-black. Head somewhat flattened in the middle, obsoletely channelled in the centre behind; palpi (♂) testaceous, the last joint of the maxillary pair long and stout, scalene-triangular; antennæ (♂) piceous with the four basal joints reddish-testaceous, elongate, filiform, joint 3 slender, 4–11 stout, 4 twice as wide as and very much longer than 3, 5–10 decreasing gradually in width, 7–10 very much longer than broad, 11 longer than 10; prothorax transverse; elytra moderately long, gradually narrowing from the base; beneath black, the sides of the breast and the base of each ventral segment yellowish-cinereous-pubescent; pygidium very elongate, rather stout, about two and a half times the length of the hypopygium; anterior legs testaceous, the middle pair piceous, the hind pair black with the tibial spurs testaceous; the hind tibiæ with five (including the subapical one), the first joint of the hind tarsi with four, and the second joint with two, short, oblique, parallel ridges.

Length to end of the elytra $3\frac{1}{2}$, to tip of the pygidium $4\frac{2}{3}$, millim.; breadth $1\frac{1}{4}$ millim. (♂.)

Hab. GUATEMALA, Senahu in Vera Paz (*Champion*).

One male example. Allied to *M. forticornis*, from the same sex of which it may be easily distinguished by the much shorter antennæ and longer pygidium, the flattened, opalescent head, and the stout and much more angular apical joint of the maxillary palpi. The fourth and fifth joints of the antennæ are subequal; this character will distinguish *M. opalescenticeps* from all the varieties of *M. instabilis* (♂), in which, however, these organs are paler in colour, shorter, and more slender.

17. **Mordellistena sanguinicollis.** (Tab. XIV. figg. 10, ♂; 10 *a*, antenna; 10 *b*, maxillary palpus.)

Elongate, cuneiform; the head black with a brilliant opalescent lustre, the prothorax rufous, the elytra with two rather broad reddish fasciæ—one a little below the base, extending obliquely upwards to the shoulder (with the one on the opposite elytron nearly enclosing a broad scutellar patch), the other beyond the middle, transverse, both interrupted at the suture,—the pygidium broadly rufous at the base, blackish beyond; the pubescence on the head, prothorax, scutellum, and elytral fasciæ, and also (very narrowly) along the basal half of the suture and at the apex of the elytra, yellowish-cinereous, for the rest brownish-black. Palpi testaceous, the last joint of the maxillary pair moderately long, scalene-triangular, rather slender; antennæ piceous with the three basal joints testaceous, joint 3 short, slender, 4 much longer and stouter than 3, 5 a little wider and about one half longer than 4, 5–11 filiform, moderately thickened, 7–10 subequal, twice as long as broad; prothorax transverse; elytra gradually narrowing from the base; beneath black, the posterior coxæ and venter, in great part, and the prothorax rufous; pygidium very long, twice the length of the hypopygium; legs testaceous, the hind pair reddish; the hind tibiæ with five, the first joint of the hind tarsi with four, and the second joint with two, short, oblique, parallel ridges.

Length to end of the elytra $3\frac{1}{4}$, to tip of the pygidium $4\frac{1}{4}$, millim.; breadth $1\frac{1}{4}$ millim. (♂.)

Hab. Panama, San Feliz in Chiriqui (*Champion*).

One male example. Somewhat resembling *M. forticornis* (♂), but with the antennæ much less elongate, the fourth joint shorter and narrower than the fifth though much stouter and longer than the third; the last joint of the maxillary palpi less elongate; the thorax, the venter, the pygidium at the base, the elytral fasciæ, and the hind legs rufous, the anterior and intermediate legs testaceous. The elytral fasciæ in *M. forticornis* are formed entirely by the arrangement and colour of the pubescence; in *M. sanguinicollis* there is a corresponding difference in the ground-colour.

A single worn specimen from Tolé is perhaps a female of the same species; it has the antennæ very much shorter and more slender, the third and fourth joints subequal, and the outer eight joints obscure testaceous; the head pitchy-red; and the postmedian fascia of the elytra broken up into two oblong spots. It is considerably smaller than the male above described.

18. **Mordellistena trilinea.** (Tab. XIV. figg. 11; 11 *a*, maxillary palpus; 11 *b*, hind leg.)

Moderately elongate, broad, robust, cuneiform; the head reddish-testaceous with an opalescent lustre, the eyes, the prothorax, scutellum, elytra (the extreme apex excepted), and pygidium black, the apex of the elytra testaceous; the head, the sides of the prothorax indeterminately, the scutellum, the suture and a sublateral stripe on each elytron to one third from the apex, and also the apex itself, yellowish-cinereous-pubescent, the rest of the pubescence brownish-black. Head not very convex, obsoletely channelled in the middle behind; palpi testaceous, the last joint of the maxillary pair moderately stout, scalene-triangular, the apical side somewhat rounded; antennæ obscure testaceous, short, comparatively slender, joints 3 and 4 narrow, subequal, 5–11 a little widened, 5–10 subserrate, equal in length and breadth, a little longer than broad, 11 longer than 10; prothorax transverse; elytra moderately long, gradually narrowing from the base; beneath (the head and prothorax excepted) black, the base of the ventral segments yellowish-cinereous-pubescent; pygidium moderately long, twice the length of the hypopygium; anterior and middle legs testaceous, the hind pair pitchy-black with the tibial spurs testaceous; the hind

tibiæ with six (including the subapical one, the basal one abbreviated), the first joint of the hind tarsi with four, and the second joint with two, short, oblique, parallel ridges.

Length to end of the elytra $3\frac{1}{2}$, to tip of the pygidium $4\frac{1}{2}$, millim.; breadth $1\frac{2}{5}$ millim. (♀.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

One example. A stoutly built, rather broad species, with reddish-testaceous head, palpi, and antennæ, and black thorax, elytra (the testaceous tip excepted), and body; the sides of the thorax, the suture and a sublateral stripe on the elytra to one fourth from the apex, and the apex itself, yellowish-cinereous-pubescent.

19. **Mordellistena texana.**

Mordellistena texana, J. B. Smith, Trans. Am. Ent. Soc. x. pp. 89, 98 [1].

Elongate, broad, robust, subparallel, black, the head (the eyes excepted) and prothorax rufous; the pubescence on the elytra black with intermixed yellowish hairs, for the rest partaking of the ground-colour. Head large and broad, the eyes large; maxillary palpi obscure testaceous, short, stout, the last joint triangular, its inner and apical sides about equal in length; antennæ short and stout, obscure testaceous, the five outer joints piceous, joints 3 and 4 short, about equal in length, 5 nearly twice as long as and very much wider than 4, 5–10 gradually decreasing in width, 8–10 almost as broad as long, 11 longer than 10; prothorax not much broader than long; elytra elongate, parallel in their basal half; beneath, the prothorax excepted, black, the base of each ventral segment cinereo-pubescent; pygidium moderately long, twice the length of the hypopygium; legs black, the anterior and middle femora and tibiæ in great part, and the hind tibial spurs, testaceous; the hind tibiæ and the first joint of the hind tarsi each with about five (the basal one on each indistinct), the second joint of the hind tarsi with three, short, oblique, parallel ridges.

Length to end of the elytra $4\frac{1}{2}$, to tip of the pygidium $5\frac{1}{2}$, millim.; breadth $1\frac{1}{2}$ millim.

Hab. North America, Texas [1].—Mexico, Monterey in Nuevo Leon (*Höge*).

One example, apparently of the female sex. This species is extremely like *M. atripennis*, but it has much shorter maxillary palpi, shorter antennæ, larger eyes, and the elytral pubescence with intermixed yellowish hairs. The lateral margin of the thorax behind, and also the extreme basal margin, is slightly stained with piceous. The description of *M. texana* is inadequate for determination, but so far as it goes it agrees with our insect.

20. **Mordellistena hexastigma.** (Tab. XIV. figg. 12, ♂; 12 *a*, maxillary palpus.)

Moderately elongate, rather robust, cuneiform; the head and prothorax testaceous, the eyes and the tips of the mandibles black, the prothorax with traces of a slightly darker broad oblong median vitta and a patch on either side of it; the elytra piceous, with an oblique stripe extending from the shoulders almost to the suture (nearly surrounding a common rhomboidal basal spot of the ground-colour), an angulated fascia a little beyond the middle, the suture and lateral margin beyond this (narrowly), and the apex, flavo-testaceous; the pygidium flavo-testaceous at the base, darker towards the tip; the pubescence partaking of the ground-colour. Head moderately convex; palpi (♂) testaceous, the last joint of the maxillary pair rather long and stout, subtriangular, its inner and apical sides almost equal in length, the outer side concave, the second joint stout; antennæ (♂) fusco-testaceous with the basal joints paler, short and slender, joints 3 and 4 short, narrow, subequal, 5–11 widened, equal in width, 5 about twice as long as 4, not much longer than broad, 11 considerably longer than 10; prothorax transverse; elytra moderately long, gradually narrowing from the base; beneath entirely testaceous; pygidium (♂) moderately

elongate, more than twice the length of the hypopygium; legs testaceous, the hind pair a little darker; the hind tibiæ with five (including the subapical one), the first joint of the hind tarsi with four (the basal one very short), and the second joint with two, short, oblique, parallel ridges.

Length to end of the elytra 3, to tip of the pygidium $3\frac{2}{3}$, millim.; breadth 1 millim. (♂.)

Hab. Panama, Bugaba (*Champion*).

One male example. Deceptively like *M. sexmaculata* (♀), but with the antennæ much shorter and more slender, the palpi differently shaped, the pygidium shorter, &c. The head is without opalescent lustre; the ground-colour of the elytra is piceous, and the flavo-testaceous markings extend to the lateral margin and also (the oblique basal one excepted) to the suture; the last joint of the maxillary palpi is wider than in *M. sexmaculata* and has its outer side hollowed out; the third joint of the hind tarsi is without ridges. From the paler varieties of *M. instabilis* the more angulated elytral fasciæ will easily distinguish it.

21. **Mordellistena venusta.** (Tab. XIV. figg. 13; 13 *a*, hind leg.)

Moderately elongate, robust, cuneiform; the head and prothorax flavo-ferruginous, the head with a brilliant opalescent lustre, the eyes and the tips of the mandibles black, the elytra black, with a reddish-yellow oblique stripe on the disc extending from the base some little distance downwards, the pygidium reddish-yellow to the middle, black beyond; the elytra with an oblique stripe of yellowish-cinereous pubescence extending from the base to fully four-fifths of their length—this pubescence placed upon and forming a continuation of the stripe on the surface beneath—and the suture towards the base also with a little yellowish pubescence, for the rest densely black-pubescent; the pubescence on the head and prothorax partaking of the ground-colour and rather sparse. Head moderately convex; palpi testaceous, the last joint of the maxillary pair piceous, the latter triangular, rather narrow, its inner side not much shorter than the outer side, the latter nearly twice as long as the apical side; antennæ moderately long, comparatively stout, black, the three basal joints obscure testaceous, joint 3 short, narrow, 4 a little wider and longer than 3, 5–11 moderately widened, subserrate, 5–10 equal in length and breadth, longer than wide, 5 very much broader and longer than 4, 11 slightly longer than 10; prothorax transverse; elytra moderately long, narrowing from the base; beneath entirely reddish-testaceous; pygidium moderately elongate, twice the length of the hypopygium; legs pitchy-brown, all the femora and the base of the hind tibiæ testaceous; the hind tibiæ with five (including the subapical one, the basal one abbreviated), the first joint of the hind tarsi with three, and the second joint with two, rather long, oblique, parallel ridges.

Length to end of the elytra $3\frac{1}{2}$, to tip of the pygidium 4, millim.; breadth $1\frac{1}{3}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

One specimen, its sex not ascertained. A species without near ally, as regards colour and the arrangement of the elytral pubescence. The oblique ridges on the hind tibiæ are longer than in *M. sexmaculata*, &c.: they extend fully halfway across the outer face of the tibia. The North-American *M. attenuata*, Say (*vittigera*, Lec.), has the elytra somewhat similarly marked.

22. **Mordellistena pictipennis.** (Tab. XIV. fig. 14, ♂.)

Moderately elongate, cuneiform, black; the head, the prothorax with an elongate-triangular mark on either side of the middle behind—extending forwards nearly to the apex and connected along the basal margin, —the scutellum, the elytra with two short parallel oblique streaks on the disc below the base, some

markings below the shoulder, three streaks placed in a line across the disc beyond the middle (forming an interrupted fascia, the outer one the longest), the apex, the suture very narrowly to beyond the middle, and the extreme base, and also the pygidium at the base, yellowish-cinereous-pubescent, the rest of the pubescence black. Palpi obscure testaceous, the last joint of the maxillary pair stout, elongate-triangular, its inner and apical sides about equal in length, both much shorter than the outer side; antennæ comparatively short, black, the basal four joints testaceous, joints 3 and 4 short, slender, equal in length, 4 a little stouter than 3, 5–11 moderately widened, 5 nearly twice as broad as and very much longer than 4, 5–10 longer than broad, about equal in length; prothorax transverse; elytra gradually narrowing from the base; beneath black, the sides of the breast and the base of each ventral segment yellowish-cinereous-pubescent; pygidium moderately long, twice the length of the hypopygium; anterior and middle legs piceous, the hind pair black with the tibial spurs testaceous; the hind tibiæ with five, the first joint of the hind tarsi with four, and the second joint with two, short, oblique, parallel ridges.

Length to end of the elytra 3, to tip of the pygidium $3\frac{2}{3}$, millim.; breadth 1 millim. (♂.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

One male example. Differs from all the other *Mordellistenæ* here described in the arrangement of the pubescent markings of the elytra. The fourth joint of the antennæ is slender, as in *M. trilinea*, &c.; the apical joint of the maxillary palpi is comparatively stout and angular; the pygidium is moderately long.

23. **Mordellistena guttifer.** (Tab. XIV. fig. 15, ♂.)

Moderately elongate, cuneiform, black; the head, the prothorax with a narrow stripe on the disc, an indistinct stripe on either side of it, the base, and the sides, indeterminately, the scutellum, the elytra with an angulated fascia a little below the base, a spot at the shoulders connected with it, another fascia just beyond the middle (formed by three oblong coalescent spots on each elytron, the outer one much longer than the others), an angular spot near the suture beyond this, the apex, and the entire suture, narrowly, and the pygidium, yellowish-cinereous-pubescent, the rest of the pubescence on the elytra purplish-black and that between the pubescent markings on the prothorax brown. Head moderately convex; palpi (♂) flavo-testaceous, the last joint of the maxillary pair darker at the tip, the latter broad, triangular, its inner and apical sides about equal in length; antennæ (♂) flavo-testaceous, but becoming darker beyond the middle, the terminal four joints pitchy-brown, comparatively short, rather slender, joints 3 and 4 short, equal in length, 4 a little wider than 3, 5–11 equal in width, broader than 4, 5–10 subserrate, slightly decreasing in length, all longer than broad; prothorax transverse; elytra narrowing very gradually from the base, moderately long; beneath black, yellowish-cinereous-pubescent, the venter uniformly so; pygidium long and rather stout, twice the length of the hypopygium; legs (♂) piceous, the anterior femora and tibiæ and the hind tibial spurs testaceous, the anterior tibiæ stout; the hind tibiæ with five (including the subapical one, the basal one abbreviated and faint), the first joint of the hind tarsi with four (the basal one abbreviated), and the second joint with two, short, oblique, parallel ridges.

Length to end of the elytra $2\frac{2}{3}$, to tip of the pygidium $3\frac{1}{3}$, millim.; breadth 1 millim. (♂.)

Hab. Mexico, Cerro de Plumas (*Höge*).

One male example. This small species has the pubescent markings of the elytra very neatly and sharply defined. The last joint of the maxillary palpi is stout and triangular. The antennæ are comparatively short, not elongated as in the males of some of the allied forms. In the arrangement of the elytral pubescence, *M. guttifer* differs considerably from all the other *Mordellistenæ* here described.

24. **Mordellistena crassipalpis.** (Tab. XIV. figg. 16, ♂; 16 *a*, antenna; 16 *b*, maxillary palpus; 16 *c*, hind leg.)

Elongate, subparallel; the head reddish-testaceous, with the eyes and a large transverse patch on the vertex (sometimes not quite reaching the eyes or occiput) black; the prothorax reddish-testaceous, with an oblong median patch on the disc behind, excised in the centre in front, the base broadly, and in one example the apex in the middle, black; the scutellum, elytra, and pygidium black; the pubescence coarse and dense, that on the elytra consisting of intermixed black and yellowish-cinereous hairs. Maxillary palpi (♂) testaceous, piceous at the tip, exceedingly stout, the second joint much thickened, the apical joint comparatively short, sharply triangular, its inner and apical sides equal in length; antennæ short and stout, black, the basal four joints reddish, joints 3 and 4 short, equal in length, 5 nearly twice as long as and very much stouter than 4, 5–10 decreasing in width, equal in length, not very much longer than broad; prothorax a little broader than long; elytra elongate, subparallel in their basal half; beneath, the head and prothorax excepted, black, brownish-cinereous-pubescent; pygidium moderately elongate, about twice the length of the hypopygium; legs comparatively stout, black, the anterior femora and tibiæ, the middle femora, and the hind tibial spurs testaceous; the hind tibiæ and the first joint of the hind tarsi each with three or four, the second joint of the hind tarsi with two or three, short, oblique ridges.

Length to end of the elytra 4, to tip of the pygidium $4\frac{2}{3}$, millim.; breadth $1\frac{1}{5}$ millim. (♂.)

Hab. Mexico, Guanajuato (*Sallé*), Tupataro in Guanajuato (*Höge*).

Three examples. Very like *M. pilosa*, but with the thorax less transverse; the antennæ shorter and stouter, the fifth joint stouter than the sixth; the maxillary palpi very much stouter, the apical joint not nearly so elongate and sharply triangular, the second joint much wider; the elytral pubescence not uniform, but consisting of intermixed black and yellowish-cinereous hairs. In this species the maxillary palpi are unusually stout.

25. **Mordellistena instabilis.** (Tab. XIV. figg. 17, ♂; 18, ♂, var.)

Moderately elongate, cuneiform, black or piceous, the mouth-parts testaceous, in some examples the sides of the prothorax and the elytra and pygidium in part reddish-brown; the elytra each with two fasciæ of variable size—one below the base, oblique, extending to the shoulders, the other, oblique or transverse, a little beyond the middle, the two often connected laterally,—the apex, and the suture, more or less, yellowish-cinereous-pubescent, the rest of the pubescence black, the markings in dark examples entirely formed by the colour and arrangement of the pubescence, in the light ones accompanied by a difference in the ground-colour; the pubescence on the head, prothorax, scutellum, and pygidium yellowish-cinereous. Head with or without a slight opalescent lustre; palpi testaceous, the last joint of the maxillary pair moderately stout, subtriangular, a little longer in the male than in the female; antennæ comparatively short, still shorter in the female, testaceous, the outer joints sometimes darker, joints 3 and 4 slender, 4 very little stouter than 3, 5–11 subfiliform, 5 stouter than and nearly twice as long as 4, 5–10 decreasing slightly in length, equal in width, all much longer than broad; prothorax transverse; elytra gradually narrowing from the base; beneath black, the prothorax and venter often in great part rufous; pygidium very elongate, twice the length of the hypopygium; legs variable in colour—the two front pairs usually testaceous or reddish and the hind pair piceous, the latter sometimes reddish; the hind tibiæ with four or five (including the subapical one), the first joint of the hind tarsi with three or four, and the second joint with two, short, oblique, parallel ridges.

Var. α. The prothorax rufous or rufous with the disc indeterminately piceous.

Var. β. The head only rufous, the prothorax and elytra black, the markings of the latter formed entirely by the colour and arrangement of the pubescence.

Var. γ. The head and prothorax rufo-luteous, the disc of the latter slightly infuscate.

Var. δ. The head and prothorax black, the latter partly reddish in one example; the postmedian pubescent fascia of the elytra more extended and connected laterally with the anterior one, so as to partly enclose an elongate-triangular black patch on each elytron.

Var. ε. The head black, with a brilliant opalescent lustre; the prothorax black, with the sides and the anterior portion, except in the middle in front, reddish-testaceous; the elytra black, with two sharply defined fasciæ—one below the base, oblique, the other slightly postmedian, transverse, both interrupted at the suture and not connected laterally—and the apex cinereo-pubescent. (Fig. 18.)

Var. ζ. Resembling ε, but with the head and the greater part of the prothorax luteous; the elytral fasciæ connected along the suture by a cinereo-pubescent stripe.

Var. η. The head and prothorax piceous, the elytra sometimes reddish-brown towards the base; the pubescence of the elytra uniformly yellowish-cinereous, or interrupted by a blackish spot on the middle of the disc posteriorly.

Length to end of the elytra $2\frac{2}{3}$–4, to tip of the pygidium $3\frac{1}{3}$–$4\frac{3}{4}$, millim.; breadth 1–$1\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Oaxaca, Cerro de Plumas, Jalapa (*Höge*), Atoyac (*H. H. Smith*); Guatemala, Cerro Zunil, Panajachel, Capetillo, Dueñas, Aceituno, San Gerónimo, Sinanja (*Champion*), Coban (*Conradt*); Panama, Caldera (*Champion*).

Fourteen examples of the form taken as the type, four of var. α (Mexico and Guatemala), one of var. β (Oaxaca), four of var. γ (Guatemala), three of var. δ (Mexico), one of var. ε (Caldera), one of var. ζ (Caldera), and six of var. η (Mexico and Guatemala). A very variable and perplexing species, the different varieties of which are more or less connected by intermediate forms, several of which were obtained in the same localities. The Caldera specimens possibly belong to a distinct species, but with our limited amount of material it is inadvisable to separate them. The colour of the head and thorax varies from black to luteous, and the pubescent elytral markings may or may not be accompanied by a difference in the ground-colour; the antennæ and palpi are testaceous, the outer joints of the former, at most, slightly infuscate. Light-coloured examples have a common triangular basal patch and two oblique or quadrangular spots on the disc of each elytron black, and the rest of the elytral surface densely yellowish-cinereous-pubescent. The post-median pubescent fascia in some specimens is widened laterally in front and coalescent with the post-basal fascia; in others it is transverse and not continued upwards. The number of ridges on the hind tibiæ and first hind tarsal joint is variable, the basal one on each of them being often more or less obliterated. A single specimen from Bugaba perhaps belonging to this species has six ridges on the hind tibiæ. *M. instabilis* seems to be allied to the North-American *M. pubescens*, Fabr.

26. **Mordellistena pilosa.**

Elongate, cuneiform, robust, black, densely clothed with rather coarse brownish pubescence. Head large, broad, the eyes not quite reaching the occiput; maxillary palpi testaceous, the apical joint brown or piceous at the tip, this joint cultriform, very elongate in the male, a little shorter in the female; antennæ black or piceous with the four or five basal joints testaceous, rather stout, moderately long in the male, shorter in the female, joints 3 and 4 short, 4 a little longer than 3, 5 stouter and very much longer than 4, 5–10 subserrate, decreasing a little in length but equal in width, elongate in the male, shorter in the female; prothorax transverse; elytra very long, gradually narrowing from the base; beneath black,

cinereous- or yellowish-cinereous-pubescent; pygidium moderately long in the male, shorter in the female, twice the length of the hypopygium; legs comparatively stout, black, the anterior pair in great part or entirely, the middle femora and tibiæ in some specimens, and the hind tibial spurs testaceous; the hind tibiæ with five, the first joint of the hind tarsi with five (rarely six), and the second joint with three (rarely four), short, strong, oblique, parallel ridges.

Var. The head, except the eyes and a large patch in the middle behind, and the anterior third of the prothorax, reddish-testaceous.

Length to end of the elytra 4–4½, to tip of the pygidium 5–5⅔, millim.; breadth 1¼–1⅔ millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*); Guatemala, Capetillo, Dueñas (*Champion*).

Five examples of the type, one of the variety, the latter from Capetillo. An elongate, robustly-built species, with very elongate, cultriform, apical joint to the maxillary palpi, and numerous ridges on the hind tibiæ and first two joints of the hind tarsi, the legs comparatively stout. It is perhaps nearest allied to *M. incana*, from which it differs in the more numerous carinæ on the hind legs and in the more elongate shape. The head is narrowly extended on either side behind the eyes; the latter in *M. incana* extend to the occiput. From *M. murina* &c. the less parallel shape, the more numerous carinæ on the hind legs, and the longer apical joint to the maxillary palpi sufficiently distinguish it.

27. **Mordellistena longipalpis.** (Tab. XIV. figg. 19, ♂; 19 *a*, maxillary palpus; 19 *b*, hind leg.)

Elongate, slightly cuneiform, black, the head in front and the prothorax at the sides (to a greater or less extent) usually testaceous or reddish-testaceous; the pubescence rather coarse, brownish-cinereous, with intermixed blackish hairs. Head transverse, very much narrower than the prothorax; maxillary palpi testaceous, the apical joint in two examples (♀) piceous, very long—the last joint in the male very elongate, cultriform, in the female shorter and with the apex more rounded; antennæ slender, filiform, rather long in the male, slightly shorter in the female, black, the four basal joints testaceous, joint 3 short, 4 a little longer than 3, 5 nearly twice as long as 4, 5–11 moderately elongate; prothorax broader than long, somewhat narrowed behind in the male, the hind angles sharply rectangular; elytra elongate, subparallel towards the base; beneath black, cinereo-pubescent; pygidium very elongate in both sexes, about two and a half times the length of the hypopygium; legs black, the anterior femora and tibiæ usually, and sometimes part of the middle femora also, and the hind tibial spurs, testaceous; the hind tibiæ and the first joint of the hind tarsi each with four or five, the second joint of the hind tarsi with three, short, oblique, parallel ridges.

Length to end of the elytra 3½–4, to tip of the pygidium 4⅓–5, millim. (♂ ♀.)

Hab. Mexico, Omilteme, Chilpancingo, Xucumanatlan, Cuernavaca (*H. H. Smith*).

Six males and two females. These latter differ from the others in having the head and thorax black, the apical joint of the maxillary palpi piceous, and the sides of the thorax more parallel behind; but there is little doubt they belong to the same species. In all the males but one the sides of the thorax are testaceous. The dark examples very closely resemble *M. murina*; but they are separable therefrom by the longer maxillary palpi and the less uniformly coloured pubescence, and by the second joint of the hind tarsi having three (instead of two) ridges. The apical joint of the maxillary palpi of the male is more elongate and more cultriform than in the same sex of *M. murina*. The following, *M. discicollis*, is a closely allied species.

28. **Mordellistena discicollis.** (Tab. XIV. figg. 20, ♂ ; 20 *a*, hind leg.)

Moderately elongate, subparallel, black, the head in front and the prothorax very broadly at the sides (so as to leave a black anteriorly narrowed median vitta) testaceous; the pubescence brownish-cinereous, with intermixed blackish hairs. Head and prothorax as in *M. longipalpis*; maxillary palpi (♂) testaceous, the last joint piceous, formed very much as in the female of *M. longipalpis*; antennæ (♂) black with the two basal joints testaceous, filiform, stouter and considerably shorter than in *M. longipalpis* (♂), joints 3 and 4 very short, subequal, 5 nearly twice as long as 4, 5–10 about equal in length but decreasing in width, not twice as long as broad; elytra moderately long, subparallel in their basal third; pygidium very elongate; beneath, the head and prothorax excepted, black; legs black, the anterior femora, the base of the anterior tibiæ, the basal half of the middle femora, and the hind tibial spurs testaceous; the hind tibiæ and the first joint of the hind tarsi each with four, the second joint of the hind tarsi with three, oblique, short, parallel ridges.

Length to end of the elytra 3, to tip of the pygidium 3¾, millim. (♂.)

Hab. Guatemala, Senahu in Vera Paz (*Champion*).

One male example only, from the humid forest-region of the Atlantic slope. It has the antennæ and palpi formed very much as in the female of *M. longipalpis*.

29. **Mordellistena vicina.**

Elongate, slightly cuneiform, black; the pubescence coarse and close, and consisting of intermixed yellowish-cinereous and black hairs, the latter in one example forming a broad discoidal stripe on the basal two-thirds of each elytron. Head strongly transverse, narrowly extended on either side behind the eyes, the latter somewhat prominent; maxillary palpi black, the apical joint (♂) long and stout, cultriform; antennæ (♂) filiform, slender, moderately long, black, joints 2 and 3 or 2–4 testaceous, 4 distinctly longer than 3, the latter short, 5 about one half longer than 4, 5–11 elongate; prothorax broader than long; elytra moderately elongate; beneath black, cinereo-pubescent; pygidium elongate, more than twice the length of the hypopygium; legs black, the hind tibial spurs testaceous; the hind tibiæ and the first joint of the hind tarsi each with four or five, the second joint of the hind tarsi with two or three, short, oblique ridges.

Length to end of the elytra 3¼–3½, to tip of the pygidium 4–4½, millim. (♂.)

Hab. Mexico, Omilteme 8000 feet, Chilpancingo 4600 feet, both in Guerrero (*H. H. Smith*).

Two male examples. Very near *M. murina*, var. α, and perhaps only another form of that variable species; but differing from it by the more transverse head, the eyes somewhat prominent and not quite reaching the occiput, the apical joint of the maxillary palpi a little longer and more cultriform, and the elytral pubescence largely intermixed with black hairs. In both examples the basal joint of the antennæ is infuscate.

30. **Mordellistena atripennis.** (Tab. XIV. figg. 21; 21 *a*, maxillary palpus.)

Elongate, subparallel, moderately broad, black; the head (the eyes excepted) and prothorax (except the lateral margins posteriorly) rufous, very finely pubescent; the elytra with some cinereous hairs along the basal margin and on the basal fourth of the suture, for the rest entirely black-pubescent. Head moderately large, the eyes small; maxillary palpi piceous, long and stout, the apical joint elongate-triangular, its inner and apical sides about equal in length, the outer side concave; antennæ black, rather stout, moderately long, joints 3 and 4 short, subequal, 5 almost twice as long as and very much stouter than 4, 5–10 decreasing in width, longer than broad; prothorax about as long as broad; elytra elongate, subparallel in their basal half; beneath, the head and prothorax excepted, black, yellowish-cinereous-pubescent; pygidium slender, comparatively short; legs, the anterior coxæ, the base of the anterior

femora, and the hind tibial spurs excepted, black; the hind tibiæ and the first joint of the hind tarsi each with four, the second joint of the hind tarsi with three, short, faint, oblique ridges.

Length to end of the elytra $4\frac{1}{2}$, to tip of the pygidium 5, millim.; breadth $1\frac{3}{8}$ millim.

Hab. Mexico, Guanajuato (*Sallé*).

One example, probably of the male sex. Very like *M. texana*, of which I at first supposed it to be the male: the long maxillary palpi, smaller head, small eyes, and the narrower and relatively more elongate shape will, however, distinguish it from that species. The pubescence of the elytra, except along the suture anteriorly and along the basal margin, is uniformly black, that of the under surface being yellowish-cinereous. The larger size and more elongate shape, stouter limbs, &c., separate *M. atripennis* from *M. rubricollis*. *M. conformis*, Smith, from Texas (Bull. Brooklyn Ent. Soc. vi. p. 4), is similarly coloured and has the carinæ of the hind legs as in this species; but the description is inadequate for determination.

31. **Mordellistena incana.**

Moderately elongate, broad, cuneiform, bronze-black, the head and prothorax reddish-yellow, the prothorax broadly infuscate on the middle of the disc behind, the upper and under surfaces very densely and uniformly clothed with coarse yellowish-cinereous pubescence, the elytral punctuation very dense and fine. Head very broad, short; palpi obscure testaceous, the last joint of the maxillary pair very elongate, narrow, obliquely truncate at the apex; antennæ black with the basal four joints testaceous, short, moderately stout, joints 3 and 4 about equal in length, 5 stouter but scarcely longer than 4, 5–10 not much longer than broad, 11 longer than 10; prothorax broad, transverse; elytra gradually narrowing from the base, moderately long; beneath, the head and prothorax excepted, black; pygidium short and stout, blunt at the tip, not twice the length of the hypopygium; legs comparatively stout, testaceous, the hind tibiæ and tarsi a little darker, the hind femora piceous; the hind tibiæ with four, the first joint of the hind tarsi with four (the first abbreviated), and the second joint with two, short, parallel, oblique ridges.

Length to end of the elytra 4, to tip of the pygidium $4\frac{1}{2}$, millim.; breadth $1\frac{1}{3}$ millim.

Hab. Mexico, San Pedro in Coahuila (*Dr. Palmer*).

One example. This species differs from all the allied Central-American forms by its very dense coarse pubescence, the pubescence being similar in colour on the light and dark portions of the body. The head and thorax are very broad; the pygidium is short, blunt at the tip; the fifth joint of the antennæ is scarcely longer than the fourth; the ridges on the hind tibiæ and tarsi are short, but very sharply defined. It has more the facies of a *Mordella*.

32. **Mordellistena nigriceps.** (Tab. XIV. figg. 22, ♂; 22 *a*, maxillary palpus; 22 *b*, hind leg.)

Moderately elongate, subcuneiform, the head black, the prothorax and elytra pale castaneous, each elytron with a blackish spot on the middle of the disc at one third from the apex; the pubescence yellowish-cinereous, dark brown on the elytral spots. Palpi testaceous, the last joint of the maxillary pair stout and securiform, its apical side rounded; antennæ testaceous, filiform, rather short, joints 3 and 4 about equal in length, 4 a little stouter than 3, 5–10 slightly thickened, subequal, nearly twice as long as broad, 5 much longer than 4; prothorax transverse; elytra very gradually narrowing from the base; beneath reddish-brown, the breast darker; pygidium elongate, slender, twice the length of the hypopygium; legs

testaceous, the hind pair darker on the dorsal edge; the hind tibiæ with four, the first joint of the hind tarsi with four (the basal one rudimentary), and the second joint with two, short, oblique ridges.
Length to end of the elytra 3, to tip of the pygidium 4, millim.; breadth 1 millim. (♂.)

Hab. Mexico, Jalapa (*Höge*).

One male example. Easily separable from *M. instabilis* in all its varieties (the form η of which resembles it in the elytral markings, when present) by the stout, securiform joint of the maxillary palpi in the male. In its black head and yellowish-red thorax and elytra, the latter with a black spot on the disc of each posteriorly, it differs from all the allied forms.

33. **Mordellistena subænea.**

Very elongate, narrow, parallel, brassy-black, densely and uniformly clothed with coarse yellowish-cinereous pubescence. Maxillary palpi testaceous, the apical joint piceous, the latter comparatively small, elongate-triangular, its apical and inner sides about equal in length; antennæ (♂) piceous with the four basal joints testaceous, long and slender, filiform, joints 3 and 4 short, equal, 5 thicker than and twice as long as 4, 5–10 elongate, subequal; prothorax short, transverse; elytra very elongate, fully five times as long as the prothorax, parallel to beyond the middle; beneath black, cinereo-pubescent; pygidium (♂) very slender, moderately long, more than twice the length of the hypopygium; legs piceous, the femora and the base of the tibiæ and of the tarsal joints in great part reddish-testaceous; the hind tibiæ and the first joint of the hind tarsi each with four, the second joint with two, faint, oblique ridges.
Length to end of the elytra $3\frac{3}{4}$, to tip of the pygidium 4, millim.; breadth 1 millim. (♂.)

Hab. Guatemala, Capetillo (*Champion*).

One example. A densely pubescent, elongate, narrow species; the upper surface with a brassy lustre, the pygidium very slender, the femora and tibiæ in great part reddish-testaceous. The carinæ on the hind legs are faint and not easily seen.

34. **Mordellistena cinereonotata.** (Tab. XIV. fig. 23, ♀.)

Rather short, cuneiform, dull black, the elytra with two transverse fasciæ—one some little distance below the base and the other beyond the middle, both interrupted at the suture, the anterior one excised on its anterior and posterior edges and the posterior one interrupted laterally,—the suture from the base to the middle, and the apex cinereo-pubescent, the pubescence along the base and on either side of the disc of the prothorax and also that on the head cinereous, for the rest black. Head with a slight opalescent lustre, channelled in the middle behind; palpi obscure testaceous, the last joint of the maxillary pair darker, the latter elongate, scalene-triangular, its inner side not very much shorter than the outer side; antennæ piceous with the basal four joints testaceous, short, joints 3 and 4 narrow, subequal, 5–11 moderately widened, 5 twice as wide as and very much longer than 4, 5–9 subequal, about as broad as long; prothorax transverse; elytra narrowing from the base; beneath black, the sides of the breast and the venter cinereo-pubescent; pygidium moderately long, stout, conical, twice the length of the hypopygium; legs piceous, the anterior femora and tibiæ and the intermediate femora lighter in colour, the hind tibial spurs testaceous; the hind tibiæ with four (three rather long and a shorter subapical one), the first joint of the hind tarsi with three, and the second joint with two, fainter, oblique, parallel ridges.
Length to end of the elytra $2\frac{2}{3}$, to tip of the pygidium 3, millim.; breadth 1 millim. (♀.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

One female example. Allied to *M. pictipennis*, from which it differs in having the elytral fasciæ more transverse and less interrupted (though in the form of confluent

s pots); the antennæ much shorter; the last joint of the maxillary palpi considerably narrower and less angular; and the ridges on the hind tibiæ and first hind tarsal joint fewer in number.

35. **Mordellistena tabascana.**

Comparatively short, subcuneiform; the head luteous or reddish, the prothorax luteous, or piceous with the margins reddish, the elytra black with a curved oblique reddish-yellow stripe at the shoulders, the basal half of the pygidium reddish, for the rest black; the elytra with two fasciæ—one below the base, extending to the shoulders, and one slightly postmedian,—which are connected by a sutural stripe, and the apex, yellowish-cinereous-pubescent, the rest of the pubescence partaking of the ground-colour. Palpi flavo-testaceous, the last joint of the maxillary pair in the male long and rather narrow, scalene-triangular, in the female more ovate; antennæ (♂) flavo-testaceous, filiform, moderately long, joint 3 short and slender, 4 wider and longer than 3, much shorter than 5, subtriangular, 5–11 comparatively stout, very much longer than broad, subequal; prothorax transverse; elytra rather short, gradually narrowing from the base; beneath black, the prothorax and the ventral segments, except at the base, reddish; pygidium long, rather stout, more than twice the length of the hypopygium; legs reddish, the hind pair darker; the hind tibiæ with four, the first joint of the hind tarsi with three, and the second joint with two (faint), short, oblique ridges.

Length to end of the elytra $2\frac{1}{2}$–$2\frac{3}{4}$, to tip of the pygidium 3–$3\frac{1}{8}$, millim.; breadth $\frac{7}{8}$–1 millim. (♂ ♀.)

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

Two examples, one, a male, in good condition, the other, a female, mutilated and without antennæ. This species has the facies of a very small example of the var. γ of *M. instabilis*. The male specimen described differs from *M. instabilis* (♂) by the much narrower apical joint of the maxillary palpi.

36. **Mordellistena luteifrons.** (Tab. XIV. figg. 24, ♂, var.; 24 *a*, maxillary palpus.)

Moderately elongate, somewhat cuneiform, above and beneath black, the anterior portion of the head usually more or less reddish-testaceous; the pubescence coarse and close, brownish-cinereous, and usually with intermixed black hairs. Head short, strongly transverse; maxillary palpi black, in one example obscure testaceous, rather stout, the last joint comparatively short, scalene-triangular; antennæ short in both sexes, rather stout, black, the basal joints sometimes pitchy-red, joints 3 and 4 short, subequal, 5 stout, much longer than 4, 5–10 a little longer than broad in the male, almost as broad as long in the female; prothorax moderately transverse; elytra rather long; pygidium twice the length of the hypopygium, a little longer in the male than in the female; legs black, the anterior coxæ, femora, and tibiæ, and the base of the middle femora sometimes obscure testaceous, the hind tibial spurs testaceous; the hind tibiæ with three or four, the first joint of the hind tarsi with three, the second joint with two, short, oblique ridges.

Var. The anterior portion of the head broadly, and a spot on either side of the prothorax in front, reddish-testaceous. (Fig. 24.)

Length to end of the elytra $2\frac{3}{4}$–$4\frac{1}{3}$, to tip of the pygidium $3\frac{1}{3}$–$4\frac{3}{4}$, millim. (♂ ♀.)

Hab. Mexico, Guanajuato (*Sallé*), Tupataro, Tula (*Höge*), Xucumanatlan (*H. H. Smith*).

Nine examples of the type, two of the variety. Very near the Guatemalan *M. lati-*

collis, from which it may be separated by the less transverse thorax and by the coarser elytral pubescence, the latter with intermixed black hairs. *M. nigripilis* has a longer thorax and the elytral pubescence black. In the Sallé collection the two specimens (♂) of the variety are labelled *M. rubronotata*, Dugès; and some of those with the thorax black are ticketed *M. luteifrons*, Dugès. The head is usually very broad in both sexes, but in three examples collected by Höge it is smaller and narrower.

37. **Mordellistena nigripilis.**

Moderately elongate, somewhat cuneiform, above and beneath black, the anterior part of the head sometimes reddish-testaceous; the pubescence on the elytra uniformly black, that on the prothorax blackish-brown. Palpi black or piceous, the basal joints sometimes paler, the apical joint of the maxillary pair elongate-triangular; antennæ moderately long in the male, shorter in the female, black, joints 3 and 4 short, subequal, 5 much longer and stouter than 4, 5–10 longer than broad in the male, almost as broad as long in the female; prothorax not much broader than long; elytra moderately elongate; beneath brownish-cinereous-pubescent; pygidium moderately long in the male, shorter in the female, about twice the length of the hypopygium; legs black, the hind tibial spurs testaceous; the hind tibiæ and the first joint of the hind tarsi each with three, the second joint of the hind tarsi with two, short, parallel, oblique ridges.

Var. The head and prothorax broadly reddish-testaceous in front; the anterior coxæ, and sometimes the anterior femora also, testaceous; the elytra with a little brownish-cinereous pubescence at the extreme base.

Length to end of the elytra $2\frac{3}{4}$–$3\frac{1}{2}$, to tip of the pygidium $3\frac{1}{2}$–4, millim. (♂ ♀.)

Hab. Mexico, Amula, Chilpancingo, Tepetlapa, Acaguizotla (*H. H. Smith*), Tupataro (*Höge*).

Six examples of the type, three of the variety. Very near *M. luteifrons*, but differing from that species in the less transverse thorax and the black elytral pubescence.

38. **Mordellistena laticollis.** (Tab. XIV. figg. 25, ♂; 25 *a*, maxillary palpus, ♂; 25 *b*, maxillary palpus, ♀.)

Moderately elongate, slightly cuneiform; the head flavo- or reddish-testaceous, with a sharply-defined black patch on the vertex (not quite reaching the eyes or occiput), in one example black with nearly the anterior half flavous; the prothorax black, with the anterior half, or nearly so, abruptly flavo-testaceous (the black colour extending a little forwards on the middle of the disc), the apex in the middle sometimes marked with black; the scutellum, elytra, and pygidium black, the elytra in one example with the lateral margins posteriorly and the apex brownish; the pubescence on the dark parts brownish-cinereous, paler elsewhere. Head short and broad, strongly transverse, the eyes rather large; maxillary palpi testaceous, stout in the male, more slender in the female, the last joint in the male stout and triangular, and with its inner and apical sides equal in length—in the female considerably narrower,—the second joint also stout in the male; antennæ very short in both sexes, black, the basal four joints obscure testaceous, joints 3 and 4 narrow, subequal, 5–11 a little thickened, 5 longer and stouter than 4, 8–10 nearly as broad as long in the female; prothorax short, very strongly transverse, narrowed behind, the hind angles rather obtuse; elytra moderately long; beneath, the head and prothorax excepted, black, the pubescence brownish-cinereous; pygidium slender and moderately long in the male, short and conical in the female; anterior and middle femora and tibiæ, and the hind tibial spurs, testaceous, the rest of the legs usually in great part piceous or black; the hind tibiæ and the first joint of the hind tarsi each with three or four, the second joint of the hind tarsi with one or two, short, faint, oblique ridges.

Length to end of the elytra 3, to tip of the pygidium $3\frac{1}{2}$, millim. (♂ ♀.)

Hab. Guatemala, San Joaquin in Vera Paz (*Champion*).

Four examples. This species has the thorax unusually short and very strongly transverse, the thorax itself and the head peculiarly coloured. The form of the thorax and the brownish-cinereous (not black) elytral pubescence separate it from *M. nigripilis*.

39. **Mordellistena brunneipilis.** (Tab. XV. fig. 1, ♂.)

Elongate, rather narrow, slightly cuneiform, above and beneath, the antennæ, palpi, and legs (the hind tibial spurs excepted) black; the upper surface with a slight brassy lustre, densely and uniformly clothed with rather coarse brownish or brownish-cinereous pubescence. Head short, strongly transverse, the eyes large; last joint of the maxillary palpi moderately stout, scalene-triangular; antennæ short in both sexes, joints 3 and 4 subequal, 5–11 moderately thickened, 5 longer and much stouter than 4, 6–10 as broad as long; prothorax short, strongly transverse, not very convex, narrowed behind, the hind angles rather obtuse; elytra elongate, subparallel in their basal half; beneath densely pubescent, the pubescence a little paler than above; pygidium moderately long, more than twice the length of the hypopygium in the male, shorter in the female; the hind tibiæ with three or four, the first joint of the hind tarsi with two or three, and the second joint with two, very faint, short ridges.

Length to end of the elytra 3–3⅔, to tip of the pygidium 3½–4, millim. (♂ ♀.)

Hab. Guatemala, Totonicapam 8500 to 10,500 feet (*Champion*).

Numerous examples, all from the pine-forest region of Los Altos. This is one of numerous very closely allied species. It is chiefly distinguished by its short, strongly transverse, and somewhat flattened thorax, short antennæ, the penultimate joints of which are as broad as long, and black limbs; the pubescence of the upper surface is uniformly brown.

40. **Mordellistena umbrosa.**

Elongate, narrow, slightly cuneiform, above and beneath, the antennæ, palpi, and legs (the hind tibial spurs excepted) black; the pubescence fine, dense, uniformly black or blackish-brown. Head short, strongly transverse; palpi and antennæ as in *M. brunneipilis*; prothorax short, transverse, rather convex, narrowed behind, the hind angles obtuse; elytra and pygidium as in *M. brunneipilis*; the hind tibiæ and the first joint of the hind tarsi each with three, the second joint of the hind tarsi with two, very short, faint ridges.

Length to end of the elytra 2⅛–3½, to tip of the pygidium 2½–4⅓, millim. (♂ ♀.)

Hab. Mexico (*Sallé*), Xucumanatlan, Amula, Mexico city (*H. H. Smith*).

Seven examples. Very near *M. brunneipilis*, but differing from it in the blacker and finer pubescence, and in the less transverse and more convex thorax. The legs, antennæ, palpi, and head are black, the antennæ short in both sexes.

41. **Mordellistena murina.**

Elongate, somewhat cuneiform, black, the anterior portion of the head sometimes testaceous; the pubescence rather coarse, usually brown or brownish-cinereous, sometimes with darker hairs intermixed. Head moderately large, the eyes not prominent; palpi varying in colour from testaceous to piceous, the last joint of the maxillary pair rather stout, long, and somewhat cultriform in the male, shorter in the female;

antennæ varying in colour from black to testaceous (usually black with the three or four basal joints only testaceous)—(♂) long, filiform, with joint 3 short, 4 a little longer and stouter than 3, 5–11 elongate, (♀) shorter, with joints 3 and 4 subequal; prothorax transverse, slightly narrowed behind; elytra moderately long; beneath black, with the pubescence paler than above; pygidium slender, long in the male, shorter in the female; legs variable in colour—usually black with the anterior pair in great part, the middle tibiæ, and the hind tibial spurs testaceous, sometimes almost entirely black (the spurs excepted); the hind tibiæ and the first joint of the hind tarsi each with three or four, and the second joint of the hind tarsi with two, short, parallel, oblique ridges.

Var. α. Larger; the antennæ (♂) thicker, and with the fourth joint much stouter and fully one half longer than the third; the hind tibiæ and the first joint of the hind tarsi each with four or five, the second joint of the latter with two, short ridges.

Var. β. The four anterior legs and the antennæ testaceous, the hind femora and tibiæ partly rufous; the hind tibiæ and the first joint of the hind tarsi each with three, the second joint of the latter with two, short ridges; the elytral pubescence yellowish-cinereous along the suture and at the sides and for the rest blackish-brown, or uniformly golden-brown.

Length to end of the elytra 3–4½, to tip of the pygidium 3½–5½, millim. (♂ ♀.)

Hab. MEXICO, Omilteme, Amula, Chilpancingo, Tepetlapa, Cuernavaca, Atoyac, Fortin, Teapa (*H. H. Smith*), Oaxaca, Guanajuato (*Sallé*), Tupataro (*Höge*); GUATEMALA (*Sallé*), Dueñas (*Champion*).

A common insect in Mexico. I am quite unable to distinguish more than one species amongst the large number of specimens before me. Of the var. α we have three male examples, all from Omilteme; of the var. β two only, male and female—the former from Omilteme, the latter from Chilpancingo. From several of the similarly coloured forms here described the elongate antennæ in the male sex sufficiently distinguish *M. murina*.

42. **Mordellistena debilis.**

Moderately elongate, slightly cuneiform, black, thickly clothed with fine, silky, brown or brownish-cinereous pubescence, the pubescence sometimes blackish at the apex of the elytra. Head moderately convex, the eyes large; palpi varying in colour from pale testaceous to pitchy-brown, the last joint of the maxillary pair long and subcultriform in the male, shorter and elongate-triangular in the female; antennæ usually piceous with the four basal joints testaceous, sometimes in great part testaceous, slender, filiform, elongate in the male, much shorter in the female, joints 3 and 4 short, equal, 5 nearly twice as long as 4, 5–10 subequal, elongate in the male, shorter in the female; prothorax broader than long; elytra subparallel in their basal half, moderately long; beneath black, brownish-cinereous-pubescent; pygidium very slender, elongate in the male, shorter in the female; legs black, the front pair usually, the middle pair rarely, and the hind tibial spurs testaceous; the hind tibiæ and the first joint of the hind tarsi each with three, the second joint of the hind tarsi with two, short, parallel ridges.

Var. The head testaceous, with the vertex piceous; the antennæ entirely testaceous; the prothorax testaceous with a broad interrupted median vitta, in one example black with a transverse testaceous patch on either side before the apex.

Length to end of the elytra 2–3, to tip of the pygidium 2½–3½, millim. (♂ ♀.)

Hab. MEXICO, Chilpancingo (*H. H. Smith*); GUATEMALA, San Gerónimo, Aceituno, Capetillo, Dueñas (*Champion*), Coban (*Conradt*).

Numerous examples of the type, two only of the variety. A perplexing little species, separable from the allied forms, *M. murina* &c., by its very small size, slender antennæ,

and fine brownish pubescence. The colour of the palpi, legs, and antennæ is variable. In some of the females the antennæ are shorter than in others. The non-elongated anterior carina of the hind tibiæ distinguishes *M. debilis* from *M. funerea*, *M. flavicornis*, &c. The thorax is shorter than in *M. flavicornis*. Some of the Guatemalan specimens seem to be more finely pubescent than those from Mexico, but I am unable to separate them.

43. **Mordellistena rubricollis.** (Tab. XV. figg. 2, ♂; 2 *a*, maxillary palpus.)

Moderately elongate, subparallel, black, the head (the eyes excepted) and prothorax, and sometimes the scutellum, reddish- or flavo-testaceous, the pubescence partaking of the ground-colour. Head moderately large; maxillary palpi long, testaceous, the apical joint sometimes infuscate, the latter elongate-triangular in the male, a little shorter and more bluntly truncate at the apex in the female, the second joint stout in the male, more slender in the female; antennæ short in both sexes, a little stouter in the female than in the male, black or pitchy-brown, the basal three or four joints more or less testaceous, joints 3 and 4 short, equal in length, 5 considerably longer and much stouter than 4, 5–10 gradually decreasing in width but equal in length, longer than broad; prothorax not much broader than long; elytra moderately elongate, subparallel in their basal half; beneath varying in colour from black with the head and prothorax reddish-testaceous to reddish-testaceous with the venter and pygidium black, the pubescence on the dark parts brownish-cinereous (of a more ashy colour than that on the elytra); pygidium elongate in the male, shorter and stouter in the female, about twice the length of the hypopygium; the anterior femora and tibiæ, the middle femora (except sometimes at the tip), the middle tibiæ in some examples, and the hind tibial spurs, testaceous, the rest of the legs black; the hind tibiæ with three or four—the first sometimes indistinct or obsolete,—the first joint of the hind tarsi with three, and the second joint with two, short, oblique, parallel ridges.

Length to end of the elytra $2\frac{1}{2}$–$3\frac{1}{2}$, to tip of the pygidium 3–4, millim. (♂ ♀.)

Hab. Mexico, Chilpancingo, Venta de Zopilote, Atoyac, Teapa (*H. H. Smith*); Guatemala, El Jicaro in Vera Paz (*Champion*).

Seven specimens from Mexico and one (♀) from Guatemala. Very like *M. azteca*, but differing from that species in the much shorter and less slender antennæ in both sexes, the black (not brownish-cinereous) elytral pubescence, and the shorter pygidium (especially in the female sex). The short, subequal carinæ of the hind tibiæ and the black elytral pubescence separate *M. rubricollis* from *M. occidentalis*. The underside varies in tint according to the predominance of the reddish or of the black colour. It is not impossible that *M. rubricollis* may prove to be a colour-variety of *M. nigripilis*.

44. **Mordellistena azteca.** (Tab. XV. figg. 3, ♂; 3 *a*, maxillary palpus.)

Moderately elongate, narrow, subparallel, black, the palpi, head (the eyes excepted), and prothorax flavo-testaceous or testaceous; densely sericeous-pubescent, the pubescence on the elytra brownish-cinereous, for the rest partaking of the ground-colour. Head moderately large; maxillary palpi very long, the last joint cultriform, long, rather stout; antennæ long, very slender, filiform, testaceous, the outer joints usually darker, joints 3 and 4 short, equal, 5 twice as long as 4, 5–10 elongate, subequal; prothorax a little broader than long, somewhat strongly rounded at the sides, narrowing a little behind; elytra moderately long, subparallel in their basal half; beneath, the head and prothorax excepted, black, brownish-cinereous-pubescent; pygidium very elongate, about two and a half times the length of the hypopygium; anterior and middle legs, the middle tarsi excepted, flavo-testaceous, the hind legs b ack with the tibial spurs

testaceous; the hind tibiæ and the first joint of the hind tarsi each with three or four, the second joint with two, short, oblique ridges.

Var. The prothorax with an oblong stripe on the middle of the disc behind (and the apex in the centre in one example), and the basal half of the head, more or less infuscate or piceous.

Length to end of the elytra $2\frac{1}{2}$–$3\frac{1}{2}$, to tip of the pygidium 3–$4\frac{1}{4}$, millim.; breadth $\frac{3}{4}$–1 millim.

Hab. Mexico, Chilpancingo and Amula in Guerrero, Cuernavaca, Teapa (*H. H. Smith*).

Numerous examples of the type, two only of the variety. This is one of numerous very closely allied Mexican species, and it may be only a colour-variety of *M. murina*. Its chief characters are:—the long and slender antennæ, with joints 3 and 4 short and equal, the long maxillary palpi, the apical joint of which is cultriform in shape, the long pygidium, &c. The ridges on the hind tibiæ are short, this character readily separating *M. azteca* from *M. occidentalis*. Sexual differences I am unable to detect.

45. **Mordellistena rufopyga.**

Moderately elongate, parallel, black, the head (the eyes excepted) and prothorax reddish-testaceous, the antennæ and palpi testaceous, the pygidium reddish, the pubescence partaking of the ground-colour. Head broad, short, the eyes large; maxillary palpi rather stout, the last joint triangular, oblong, its inner and apical sides about equal in length; antennæ comparatively stout, filiform, moderately long, joints 3 and 4 very short, subequal, 5 two and a half times as long as 4, 5–10 about equal in length and width, 11 longer than 10; prothorax a little broader than long; elytra moderately long, parallel in their basal half; beneath with the head, prothorax, the middle of the breast, and the last two ventral segments reddish-testaceous, for the rest black; pygidium elongate, about two and a half times the length of the hypopygium; anterior and middle legs testaceous, the hind pair (the tibial spurs excepted) in great part piceous; the hind tibiæ and the first joint of the hind tarsi each with three, the second joint of the hind tarsi with two, short, oblique, parallel ridges.

Length to end of the elytra $2\frac{1}{3}$, to tip of the pygidium 3, millim. (♂.)

Hab. Guatemala, Capetillo (*Champion*).

One male example. Smaller and less elongate than *M. rubricollis*; the antennæ (♂) a little longer, and with their joints 5–11 equal in width, 5 longer than 3 and 4 united; the maxillary palpi less elongate, and with a much shorter apical joint; the head more transverse; the pygidium and last two ventral segments reddish, the former more elongate; the elytral pubescence black. The stouter and less elongate antennæ, short tibial carinæ, &c., distinguish it from *M. filicornis*.

46. **Mordellistena sparsa.** (Tab. XV. figg. 4, ♂; 4 *a*, maxillary palpus.)

Moderately elongate, narrow, subparallel, above and beneath, the antennæ, palpi, and legs (except the hind tibial spurs, which are testaceous) black, densely and rather coarsely pubescent; the elytra from the base to the apex with small, somewhat closely placed, transverse, partly confluent, irregular patches of cinereous or yellowish-cinereous hair, for the rest black-pubescent, the pubescence on the head and prothorax in part cinereous. Maxillary palpi stout, the last joint moderately long, triangular; antennæ comparatively short, joints 3 and 4 short, narrow, subequal, 5–11 moderately thickened, 5 much longer and stouter than 4, 5–10 equal in width and length, about as broad as long, 11 very much longer than 10; prothorax

broader than long; elytra moderately elongate, subparallel in their basal half; beneath in great part cinereo-pubescent; pygidium comparatively stout, moderately long, shorter and blunter in some examples, about twice the length of the hypopygium; the hind tibiæ and the first joint of the hind tarsi each with two (rarely three) short, faint, oblique ridges near the tip, the second joint of the hind tarsi with one or two ridges.

Length to end of the elytra 2–3, to tip of the pygidium $2\frac{1}{2}$–$3\frac{1}{2}$, millim. (♂ ♀.)

Hab. Mexico, Saltillo in Coahuila (*Dr. Palmer*), Chilpancingo, Xucumanatlan, Mexico city (*H. H. Smith*), Puebla, Guanajuato (*Sallé*), Tupataro (*Höge*), Amecameca (*Flohr*).

Not uncommon in Central and Northern Mexico, whence we have received numerous examples. I am unable to identify the species with any of those described from North America. The pygidium varies in length, it being shorter and stouter in some males than in others. The legs, antennæ, and palpi are black.

47. **Mordellistena dispersa.**

Broader, larger, and more robust than *M. sparsa*; the upper surface with a brassy lustre; the antennæ, palpi, and legs similar in form and colour; the dense coarse pubescence consisting of intermixed dark brown and yellowish-cinereous hairs, the light-coloured hairs on the elytra not forming distinct, transverse, irregular patches, but scattered here and there (as on the prothorax) over the surface; head large and broad, almost as wide as the prothorax, the latter broad, strongly transverse; the pygidium stout, conical, short; the hind tibiæ and the first joint of the hind tarsi each with four, the second joint of the hind tarsi with two, short oblique ridges.

Length to end of the elytra $3\frac{1}{2}$, to tip of the pygidium $4\frac{1}{4}$, millim. (♀.)

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

One specimen only, apparently quite distinct from *M. sparsa*. The pubescence consists of intermixed dark brown (not black) and yellowish-cinereous hairs, the latter showing no tendency to form transverse fascicles on the elytra as in *M. sparsa*; the carinæ on the hind legs are also more numerous.

48. **Mordellistena tessellata.** (Tab. XV. figg. 5, ♂; 5 *a*, maxillary palpus.)

Moderately elongate, very narrow, subparallel, above and beneath black, the pubescence dense and rather coarse; the elytra with numerous rather large, transverse or oblique, patches of cinereous hair, these patches tending to form irregular fasciæ, for the rest black-pubescent; the pubescence on the head and prothorax, and at the base of the pygidium, partly cinereous. Head very convex; maxillary palpi (♂) piceous with the basal joints paler, the apical joint very long, stout, and cultriform; antennæ (♂) moderately long, slender, filiform, piceous, the four basal joints flavo-testaceous, joints 3 and 4 subequal, 5 considerably longer but not much stouter than 4, 5–10 equal in length and breadth, much longer than broad, 11 very much longer than 10; prothorax a little broader than long; pygidium moderately elongate; legs black, the anterior coxæ flavo-testaceous, the hind tibial spurs piceous; the hind tibiæ with three, the first and second joints of the hind tarsi each with two, very short oblique ridges near the tip.

Length to end of the elytra $1\frac{7}{8}$, to tip of the pygidium $2\frac{1}{4}$, millim.; breadth $\frac{1}{2}$ millim. (♂.)

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

One male example only of this minute species has been received. Very like *M. sparsa*, but easily separable from the same sex of that insect by the much more elongate apical

joint of the maxillary palpi, the slender antennæ, the four basal joints of which are yellow and the fifth joint not very much stouter than the fourth, &c. The patches of cinereous pubescence on the elytra are larger and less numerous, and they tend to form irregular zigzag fasciæ; the anterior coxæ are yellow, the hind tibial spurs piceous.

49. **Mordellistena quadrifasciata.** (Tab. XV. fig. 6.)

Moderately elongate, narrow, subparallel, black, finely and rather sparsely pubescent; the elytra with numerous, transverse, irregular patches of yellowish-cinereous hair, these patches forming four zigzag fasciæ, for the rest blackish-brown-pubescent, the head and prothorax partly cinereo-pubescent. Head very convex; maxillary palpi pitchy-brown, the apical joint moderately stout, somewhat cultriform; antennæ piceous with the four basal joints obscure testaceous, moderately long, joints 3 and 4 short, equal, 5 very much longer and stouter than 4, 5–10 equal in width and length, a little longer than broad, 11 much longer than 10; prothorax almost as long as broad; pygidium elongate; legs black, the hind tibial spurs testaceous; the hind tibiæ and the first joint of the hind tarsi each with three, the second joint of the hind tarsi with two, very short, oblique ridges near the tip.

Length to end of the elytra $2\frac{1}{2}$, to tip of the pygidium 3, millim.

Hab. Mexico, Northern Sonora (*Morrison*).

One specimen. Very near *M. sparsa* and *M. tessellata*: from the former it differs by its longer thorax and finer pubescence, and by the cinereous patches on the elytra being much less scattered and forming four zigzag fasciæ; from the latter it may be distinguished by the less slender antennæ and by the more regular arrangement of the sparser and finer elytral pubescence.

50. **Mordellistena cincta.**

Short, cuneiform, black, the mouth-parts testaceous; the elytra with the base, a median fascia, and in one specimen the apex broadly, yellowish-cinereous-pubescent, the rest of the elytral pubescence in great part black, that on the head and prothorax brownish. Head very convex; maxillary palpi testaceous or brown, the last joint in both sexes elongate-triangular with the inner apical angle almost rounded; antennæ pitchy-brown with the four basal joints testaceous, slender, filiform, elongate in the male, shorter in the female, joints 3 and 4 short, equal, 5 fully twice as long as 4, 5–10 in the male elongate, subequal, in the female a little shorter; prothorax broader than long; elytra comparatively short; pygidium elongate, more than twice the length of the hypopygium; legs black, the anterior femora and tibiæ obscure testaceous, the hind tibial spurs testaceous; the hind tibiæ with three, the first and second joints of the hind tarsi each with two, short, oblique ridges.

Length to end of the elytra $1\frac{1}{2}$–$1\frac{3}{4}$, to tip of the pygidium 2–$2\frac{1}{3}$, millim. (♂ ♀.)

Hab. Guatemala, Zapote, San Gerónimo (*Champion*).

Two examples. This very minute species closely resembles *M. perexigua* and *M. pulicaria*; but it has very much longer antennæ, the last joint of the maxillary palpi very similarly formed in both sexes, and the carinæ on the hind legs differently arranged. *M. cincta* is perhaps nearest allied to *M. annulipyga*, from which its longer and more slender antennæ and pygidium, narrower apical joint of the maxillary palpi, much smaller size, &c., sufficiently distinguish it. The cinereo-pubescent median fascia and apical patch are well marked in the female, but in the male they are not very distinct.

51. **Mordellistena diluta.** (Tab. XV. figg. 7; 7 *a*, maxillary palpus; 7 *b*, hind leg.)

Elongate, narrow, subparallel, shining; the head (the eyes excepted), prothorax, and scutellum flavo-testaceous; the elytra piceous, each with the middle of the disc anteriorly testaceous or brownish (the sides and apical half, and the suture also in one example, more or less piceous); the pygidium obscure testaceous; the pubescence sparse and partaking of the ground-colour. Head moderately large, the eyes small; maxillary palpi obscure testaceous, the last joint quite slender, elongate-ovate; antennæ moderately long, rather stout, pitchy-brown, the three basal joints testaceous, joint 3 narrow, short, 4–11 thickened, 4 much longer and stouter than 3, 4–10 subequal, considerably longer than broad, 11 slightly longer than 10; prothorax about as long as broad; elytra elongate, subparallel in their basal half; beneath flavo-testaceous, the last two ventral segments slightly infuscate; pygidium very slender and elongate, at least three times the length of the hypopygium; legs flavo-testaceous, the carinæ on the hind legs piceous; the hind tibiæ with three ridges—the first and second oblique, parallel, extending halfway across the outer face of the tibia, the third (subapical) short; the first joint of the hind tarsi with two oblique ridges, the second joint with one only.

Length to end of the elytra 3–3½, to tip of the pygidium ⅔–4, millim.

Hab. Guatemala, Calderas on the slope of the Volcan de Fuego 7000 feet (*Champion*).

Two examples, apparently male and female, one of them having a longer pygidium than the other. This species differs from all others of the genus here described by the very narrow, elongate-ovate apical joint of the maxillary palpi. The antennæ are comparatively stout, their fourth and fifth joints subequal, the fourth much longer and stouter than the third; the pubescence is quite sparse; the pygidium is very elongate and slender.

52. **Mordellistena orizabensis.** (Tab. XV. figg. 8, ♂; 8 *a*, hind leg.)

Mordellistena orizabensis, Mäkl. Act. Soc. Fenn. x. p. 589 [1].

Very elongate, subparallel, black, the head and prothorax reddish-testaceous, the latter with a large oblong black patch on the middle of the disc behind, the pubescence dense and partaking of the ground-colour. Palpi testaceous, the last joint of the maxillary pair darker, the latter moderately stout, elongate, scalene-triangular, its inner and outer sides somewhat concave; antennæ piceous with the basal four joints testaceous, long and slender, filiform, joints 3 and 4 short, equal, together as long as 5, 5–11 very little thickened, subequal, more than twice as long as broad; prothorax transverse; elytra elongate, subparallel in their basal half; beneath, the head and prothorax excepted, black; pygidium exceedingly long, slender, three times the length of the hypopygium; anterior and middle legs in great part testaceous, the hind pair piceous with the tibial spurs testaceous; the hind tibiæ with four oblique ridges—the first abbreviated, the second very long, extending across the outer face of the tibia to near the base, and sometimes interrupted in the middle, the others short; the first joint of the hind tarsi with four or five, and the second joint with two or three, parallel ridges.

Length to end of the elytra 3¾–4, to tip of the pygidium 5¼–5½, millim.

Hab. Mexico (*Boucard* [1]), Cordova (*Sallé*).

The ridges on the hind tibiæ are rather irregular and sometimes interrupted. The pygidium is exceedingly elongate. Three specimens of this species are contained in the Sallé collection, two of which are males.

53. **Mordellistena mutabilis.** (Tab. XV. figg. 9, ♀; 10, ♂, var.; 11, ♀, var.)

Moderately elongate, narrow, subparallel, black, the head pitchy-brown or reddish-testaceous; the prothorax with an obscure testaceous spot at the sides in front in one example; the elytra each with a large flavo-testaceous patch immediately below the base (extending to the lateral margin, but not to the suture, and obliquely cut off behind) and a large, oblong, obscure testaceous patch on the disc beyond the middle (very narrowly interrupted at the suture); the pygidium piceous, reddish at the base; the pubescence on the elytral markings yellowish, for the rest partaking of the ground-colour. Head rather elongate, the eyes not very large; maxillary palpi testaceous, the last joint elongate-triangular, comparatively narrow, its apical side as long as the inner side, the inner apical angle rounded; antennæ testaceous, slender, filiform, moderately long in the male, considerably shorter in the female, joints 3 and 4 short, together not much longer than 5, 4 slightly longer than 3, 5–11 very little stouter, subequal, in both sexes very much longer than broad; prothorax nearly as long as broad; elytra moderately long, subparallel in their basal half; beneath black, with the apex of the ventral segments, in one example the entire apical one, testaceous; pygidium very elongate and slender; legs testaceous, the hind pair and the middle femora piceous or infuscate, the anterior tibiæ a little thickened in the male; the hind tibiæ with three oblique ridges—the first extending across the outer face of the tibia to near the base, the second much shorter, the third very short; the first joint of the hind tarsi with three, the second joint with two, oblique ridges.

Var. α. The prothorax and elytra black, the latter with a flavo-testaceous oblique spot below the shoulders only. (Fig. 10.)

Var. β. The elytra fusco-testaceous, paler towards the base, with the suture—broadly at the base, very narrowly beyond,—and the sides at the middle, black or piceous; the sides of the prothorax broadly, the pygidium, and the posterior coxæ sometimes obscure testaceous; the apical joints of the antennæ slightly infuscate.

Var. γ. Testaceous, the prothorax with a black spot on the disc; the elytra flavo-testaceous, with the base narrowly, an angulated ante-median fascia (widening outwardly, interrupted on the disc in one example), the suture from this to the base, and in one specimen the apex, black. (Fig. 11.)

Var. δ. Testaceous, the sides of the elytra narrowly from the base to the middle and the anterior portion of the breast piceous.

Length to end of the elytra $2\frac{1}{4}$–3, to tip of the pygidium 3–$3\frac{1}{4}$, millim.; breadth $\frac{3}{4}$–1 millim. (♂ ♀.)

Hab. Mexico, Chilpancingo, Teapa (*H. H. Smith*), Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Cerro Zunil, San Gerónimo, Lanquin (*Champion*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

A very variable species, according to the predominance of the black or of the testaceous colour. Ten examples are referred to it: two of the typical form (from Cordova and Lanquin), two of the var. α (from Guatemala), three of the var. β (from Mexico), two of the var. γ (from Chiriqui), and one of the var. δ (from Jalapa). The var. δ closely resembles *M. luteola* and *M. distorta*; but it is separable from both these by its much smaller eyes, and from the former also by its less elongate shape. The var. γ has the elytra marked very much as in *M. crux*; but it differs from that species in its longer thorax and in the number and arrangement of the ridges on the hind legs. The var. α (of which both sexes have been obtained) is perhaps distinct; it has the elytra marked as in *M. curvimana*. Numerous North-American forms (some of which, as noted by J. B. Smith, are evidently no more than colour-varieties of one or the other) are closely allied to this, e. g. *M. andreæ*, *M. varians*, *M. ustulata*, *M. semiusta*, &c.

54. **Mordellistena luteola.**

Elongate, narrow, subparallel, above and the oral organs and antennæ flavo-testaceous or luteous, the eyes black, the sides of the elytra in one specimen a little darker about the middle, the pubescence uniform. Head comparatively long; the eyes exceedingly large, occupying the whole of the side of the head, coarsely granulated; last joint of the maxillary palpi moderately stout, elongate, scalene-triangular, the apical side slightly rounded; antennæ moderately long, rather shorter in the female, filiform, joints 3 and 4 short, subequal, together a little shorter than 5, 5–11 elongate, 5–10 gradually decreasing in length and width, each at least twice as long as broad, 5 in both sexes the longest and stoutest; prothorax as long as broad; elytra elongate, subparallel in their basal half; beneath testaceous, the breast in front and the ventral segments 1–3 at the base sometimes piceous; pygidium very elongate and slender in both sexes, about three times the length of the hypopygium; legs flavo-testaceous, the hind pair a little darker; anterior tibiæ considerably stouter in the male than in the female, sinuous within; anterior tarsi (♂) with the first joint about as long as the others united, very slightly curved inwards, the following joints slender; the hind tibiæ with three oblique parallel ridges—the first extending across the outer face of the tibia to near the base, the second shorter, the third very short; the first joint of the hind tarsi with three, the second joint with two, oblique ridges.

Length to end of the elytra 3–3½, to tip of the pygidium 3½–4¼, millim.; breadth ¾–1 millim. (♂ ♀.)

Hab. Mexico, Cerro de Plumas (*Höge*), Teapa (*H. H. Smith*); Guatemala, Cubilguitz (*Champion*); Panama, Bugaba (*Champion*).

One male and three female examples, the male being from Bugaba. Very near *M. distorta*, but easily separable in the male sex by the form of the anterior tibiæ and tarsi: the tibiæ, instead of being broadly flattened, are merely a little thickened and sinuous, and the tarsi have their first joint very feebly curved. The eyes are equally large in the two species.

55. **Mordellistena isabellina.** (Tab. XV. figg. 12; 12 *a*, hind leg.)

Very elongate, narrow, cuneiform, above, the oral organs, antennæ, and legs brownish-yellow, beneath reddish-testaceous, the eyes black, the hind tibiæ and tarsi slightly infuscate along their dorsal edge, the pubescence uniform. Head rather elongate, the eyes large; last joint of the maxillary palpi elongate, rather narrow, its inner and apical sides about equal in length, the inner apical angle rounded; antennæ very slender, filiform, comparatively short, joints 3 and 4 short, narrow, subequal, together about as long as 5, 5–11 fully twice as long as broad, subequal; prothorax not much broader than long; elytra very elongate, narrowing from the base; pygidium moderately long, twice the length of the hypopygium, rather stout; legs very elongate; the hind tibiæ with three parallel oblique ridges—the first extending across the outer face of the tibia to near the base, the others short; the first joint of the hind tarsi with three, the second joint with two, oblique ridges.

Length to end of the elytra 3½, to tip of the pygidium 4½, millim.; breadth 1 millim.

Hab. Guatemala, Capetillo (*Champion*).

One example, probably of the female sex. Closely resembling *M. luteola*, but more cuneiform; the elytra relatively much longer, distinctly narrowing from the base, the antennæ with joints 5–11 more slender, the last joint of the maxillary palpi less angular, the pygidium stouter, and the eyes a little smaller. On the hind tibiæ and on the first joint of the hind tarsi there are traces of a short additional ridge in front of the others.

56. **Mordellistena basimacula.** (Tab. XV. fig. 13.)

Elongate, subparallel, above and beneath, the oral organs, antennæ, and legs flavo-testaceous, the scutellum and elytra black, the latter with a broad longitudinal flavo-testaceous stripe extending from the shoulders to nearly one third from the base, the pubescence partaking of the ground-colour. Head broad, the eyes moderately large; last joint of the maxillary palpi rather stout, elongate, subsecuriform; antennæ filiform, slender, comparatively short, joints 3 and 4 short, subequal, together as long as 5, 5–11 about twice as long as broad, subequal; prothorax as long as broad; elytra elongate, subparallel in their basal half; (pygidium broken off); the hind tibiæ with three oblique ridges—the first extending across the outer face of the tibia to near the base, the others short; the first joint of the hind tarsi with three, the second joint with two, oblique ridges.

Length to end of the elytra 4, breadth $1\frac{1}{8}$, millim.

Hab. Guatemala, Sinanja in Vera Paz (*Champion*).

One example, probably a female. Broader than *M. luteola*; the eyes much smaller; the elytra black, with a large, broad, flavo-testaceous humeral stripe.

57. **Mordellistena occidentalis.**

Moderately elongate, narrow, subparallel, black, the head (the eyes excepted) and prothorax flavo- or reddish-testaceous, the base of the pygidium sometimes reddish; the pubescence on the elytra brownish or brownish-cinereous, for the rest partaking of the ground-colour. Head moderately large; maxillary palpi testaceous, darker at the tip, the last joint elongate-triangular and with its outer side slightly concave; antennæ very slender, filiform, moderately long in the male, shorter in the female, black or pitchy-brown, the basal four joints more or less testaceous, joints 3 and 4 short in both sexes, equal, 5 twice as long as 4, 5–10 elongate, subequal, about twice as long as broad in the male, shorter in the female; prothorax not much broader than long; elytra moderately long, subparallel in their basal half; beneath, the head and prothorax excepted, varying in colour from black to reddish-testaceous; pygidium very elongate in the male, shorter in the female; the anterior and middle legs testaceous, the hind pair varying in colour from obscure reddish-testaceous to piceous; the hind tibiæ with three ridges—the first extending obliquely across the outer face of the tibia to near the base, the second short, the third (subapical) very short; the first joint of the hind tarsi with three, the second joint with two, short, oblique ridges.

Length to end of the elytra $2\frac{1}{2}$–$3\frac{1}{3}$, to tip of the pygidium 3–$3\frac{3}{4}$, millim. (♂ ♀.)

Hab. Mexico, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

Numerous examples. Easily separable from all the allied forms, the following three species excepted, by the position of the carinæ on the hind tibiæ: of these the first extends completely across the outer face of the tibia. In the form of the antennæ and the colour of the pubescence *M. occidentalis* is very similar to *M. azteca*.

58. **Mordellistena oculata.**

Elongate, narrow, subparallel, pitchy-black, the head (the eyes excepted) reddish-testaceous; the pubescence coarse, brownish. Head moderately convex, the eyes very large; palpi testaceous, the last joint of the maxillary pair elongate-triangular; antennæ testaceous with the apices of the outer joints infuscate, long and slender, filiform, joints 3 and 4 very short, equal, 5 more than twice as long as 4, 5–10 equal in length, 11 a little longer than 10; prothorax not much broader than long; elytra elongate, subparallel in their basal half; beneath piceous, the apex of each ventral segment testaceous; pygidium very elongate, two and a half times the length of the hypopygium; legs piceous, the anterior pair almost entirely, the middle femora, and the hind tibial spurs testaceous; the hind tibiæ with three well-defined ridges—the

first extending obliquely across the outer face of the tibia, the others shorter; the first joint of the hind tarsi with three, the second joint with two, sharp, oblique ridges.

Length to end of the elytra $3\frac{1}{3}$, to tip of the pygidium $3\frac{3}{4}$, millim. (♂.)

Hab. Mexico, Zacualtipan in Hidalgo (*Höge*).

One male example. Very near *M. occidentalis*; but differing from the same sex of that species by its very elongate antennæ, the fifth joint of which is more than twice as long as the fourth, the larger and more coarsely faceted eyes, and the piceous thorax. The antennæ are not so slender as in *M. filicornis* (♂).

59. **Mordellistena filicornis.** (Tab. XV. fig. 14, ♂.)

Moderately elongate, subparallel, very narrow, pitchy-brown, the head (the eyes excepted), antennæ, palpi, and prothorax flavo-testaceous, the pygidium reddish at the base; the pubescence fine, on the elytra brownish-cinereous, for the rest partaking of the ground-colour. Head exceedingly convex, the eyes unusually large; last joint of the maxillary palpi elongate-triangular; antennæ long, exceedingly slender, filiform, joints 3 and 4 short, equal, 5 more than twice as long as 4, 5–10 very elongate, equal in width and length, 11 longer than 10; prothorax about as long as broad; elytra moderately long, parallel in their basal half; beneath reddish-testaceous, the ventral segments 1–4 infuscate; pygidium very elongate, more than twice the length of the hypopygium; legs pale testaceous, the hind pair a little darker, the carinæ piceous; the hind tibiæ with three ridges—the first extending obliquely across the outer face of the tibia to near the base, the others short, subequal; the first joint of the hind tarsi with three, the second joint with two, short, oblique ridges.

Length to end of the elytra $2\frac{1}{2}$, to tip of the pygidium 3, millim.; breadth $\frac{3}{4}$ millim. (♂.)

Hab. Guatemala, Zapote (*Champion*).

One male example. Narrower and much smaller than *M. occidentalis* (♂); the eyes larger and more coarsely faceted; the antennæ longer, more slender, and entirely flavous. The carinæ on the hind legs are piceous, and, owing to the pale colour of these limbs, very prominent.

60. **Mordellistena flavicornis.** (Tab. XV. fig. 15.)

Moderately elongate, subparallel, black, the head (the eyes excepted) reddish-testaceous, the palpi and antennæ flavous, the pygidium reddish at the base; finely sericeous-pubescent, the pubescence on the dark parts brownish-cinereous, purplish on the elytra in certain lights. Head moderately convex, the eyes large and coarsely faceted; last joint of the maxillary palpi scalene-triangular, moderately long, rather stout; antennæ short and slender, subfiliform, joints 3 and 4 short, equal, 5 nearly twice as long as 4, 5–10 subequal, longer than broad, 11 one half longer than 10; prothorax nearly as long as broad; elytra moderately long, subparallel in their basal half; beneath, the head excepted, black, the last ventral segment testaceous, cinereo-pubescent; pygidium very elongate; the anterior legs flavous, the middle legs pitchy-brown, the hind legs (the tibial spurs excepted) piceous; the hind tibiæ with three well-defined ridges—the first extending across the outer face of the tibia to near the base, the others short, equal in length; the first joint of the hind tarsi with three, the second joint with two, oblique, well-defined ridges.

Length to end of the elytra $2\frac{1}{2}$, to tip of the pygidium $3\frac{1}{8}$, millim.

Hab. Guatemala, Dueñas (*Champion*).

Two examples, apparently females. Closely allied to *M. filicornis*, but differing from that insect in having the antennæ one third shorter, the head less convex, the eyes a

little smaller, the prothorax and underside (the last ventral segment excepted) black, and the intermediate legs pitchy-brown. At first sight, *M. flavicornis* would appear to be a variety of the female of *M. filicornis*; but the difference in the form of the antennæ is much greater than in the sexes of the allied species.

61. **Mordellistena funerea.**

Moderately elongate, narrow, subparallel, black; the pubescence sericeous, fine, uniformly brown. Palpi black, piceous, or obscure testaceous, the last joint of the maxillary pair long and subcultriform in the male, shorter in the female; antennæ moderately long in the male, a little shorter in the female, slender, filiform, black, the four basal joints usually obscure-testaceous, joints 3 and 4 short, equal, 5 stouter than and about twice as long as 4, 5–10 subequal, longer than broad; prothorax nearly as long as broad; elytra moderately long, subparallel in their basal half; beneath black, brownish-cinereous-pubescent; pygidium very elongate, about two and a half times the length of the hypopygium; legs black, the anterior femora and the anterior and middle tibiæ sometimes obscure testaceous, the hind tibial spurs flavous; the hind tibiæ with three well-defined ridges—the first extending across the outer face of the tibia, the others short; the first joint of the hind tarsi with three, the second joint with two, oblique, parallel ridges.

Length to end of the elytra 2–3⅓, to tip of the pygidium 2½–4, millim. (♂ ♀.)

Hab. Mexico, Chilpancingo (*H. H. Smith, Höge*), Tierra Colorada, Teapa (*H. H. Smith*); Guatemala, Chiacam, Tamahu (*Champion*).

Nine examples, varying greatly in size. Exceedingly like *M. murina* and only separable therefrom by the elongated anterior carina of the hind tibiæ. *M. funerea* is the only unicolorous Central-American species possessing this peculiarity. The last joint of the maxillary palpi is almost cultriform in shape in the male. From *M. occidentalis*, of which it may prove to be a colour-variety, it differs in the black head and thorax and darker limbs. The eyes are more finely faceted and the antennæ much shorter than in *M. oculata* (♂).

62. **Mordellistena distorta.** (Tab. XV. figg. 16, ♂; 16 *a*, antenna; 16 *b*, anterior tibia and tarsus; 16 *c*, hind leg.)

♂. Elongate, narrow, subparallel, above and beneath, the oral organs, and antennæ flavo-testaceous, the eyes black, the elytra slightly infuscate at the sides about the middle and also posteriorly, the pubescence uniform. Head comparatively long, very convex; the eyes exceedingly large, occupying the whole of the side of the head, coarsely granulated; last joint of the maxillary palpi elongate, not very stout, scalene-triangular; antennæ slender, filiform, moderately long, joints 3 and 4 very short, subequal, the two together shorter than 5, 5–11 elongate, subequal, rather more than twice as long as broad; prothorax as long as broad; elytra elongate, subparallel in their basal half; pygidium exceedingly elongate, slender, about three times the length of the hypopygium; legs very elongate, flavo-testaceous, the hind pair slightly darker, the intermediate pair very slender; anterior tibiæ very broadly dilated and flattened, the inner edge almost straight for the greater part of its length and then rounded to the apex, the outer edge sparsely setose and a little rounded, armed on the lower side near the outer apical angle with a very fine sharp black spur; anterior tarsi with joint 1 as long as the others united, very strongly curved inwards, exceedingly slender for two-thirds of its length, and becoming club-shaped at the apex, joints 2 and 3 moderately dilated, 4 short and narrow, slightly lobed beneath; the hind tibiæ with three oblique parallel ridges—the first extending across the outer face of the tibia to near the base, the second much shorter

the third (subapical) very short; the first joint of the hind tarsi with three, the second joint with two, oblique ridges.

Length to end of the elytra $2\frac{1}{2}$, to tip of the pygidium $3\frac{1}{2}$, millim.; breadth $\frac{3}{4}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

One immature male example of this extraordinary species has been received. The very abnormal form of the anterior tibiæ and tarsi of the male separates *M. distorta* from all the known members of the genus, the following excepted. In other respects the species is exceedingly close to *M. luteola*.

63. **Mordellistena curvimana.** (Tab. XV. figg. 17, ♂; 17 *a*, anterior tibia and tarsus.)

♂. Elongate, subparallel, rather narrow, the head, oral organs, antennæ, and prothorax testaceous, the eyes and elytra black, the latter with a large, oblong, slightly oblique, testaceous spot immediately below the shoulders (not quite reaching the base or lateral margin), the pygidium infuscate, reddish at the base; the pubescence on the dark parts brownish, for the rest partaking of the ground-colour. Head comparatively long; the eyes moderately large, somewhat finely granulated; last joint of the maxillary palpi elongate, moderately stout, scalene-triangular; antennæ long and very slender, filiform, joints 3 and 4 short, together barely as long as 5, 4 a little longer than 3, 5–11 very elongate and thin, about three times as long as broad; prothorax as long as broad; elytra very long, subparallel in their basal half; beneath testaceous, the ventral segments 1–4 in great part piceous; pygidium very elongate and slender, nearly three times the length of the hypopygium; legs very elongate, flavo-testaceous, the hind tibiæ and tarsi darker; anterior tibiæ very broadly, triangularly dilated and flattened—the inner edge straight to a little beyond the middle and then cut off obliquely to the apex, the outer edge almost straight and finely and densely setose; anterior tarsi with joint 1 nearly as long as the others united, curved inwards, slender to about the middle, and then gradually widened to the apex, joints 2–4 elongate and slender, 3 and 4 subequal; intermediate tibiæ sinuous within; the hind tibiæ with three oblique parallel ridges—the first interrupted in the middle and extending across the outer face of the tibia to near the base, the second shorter, the third very short; the first joint of the hind tarsi with three, the second joint with two, rather long, oblique ridges.

Length to end of the elytra 3, to tip of the pygidium 4, millim.; breadth $\frac{7}{8}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

One male example. Allied to *M. distorta*, but differing from the same sex of that species by the smaller and less coarsely granulated eyes, the longer and more slender antennæ, the triangularly dilated anterior tibiæ, &c.; the anterior tarsi have their first joint less curved and not so thin towards the base, and the penultimate joints longer and more slender. The anterior ridge on the hind tibiæ is interrupted in the middle, but this is probably abnormal.

64. **Mordellistena xanthopyga.** (Tab. XV. figg. 18, ♀; 18 *a*, hind leg.)

Short, cuneiform, the head reddish-testaceous, the prothorax black with the sides yellow (broadly so posteriorly), the scutellum and elytra black, the latter with two transverse yellow fasciæ—one before, the other beyond the middle, the anterior one broadly interrupted at the suture, the posterior one entire,—the pygidium flavo-testaceous, the pubescence partaking of the ground-colour. Head short and broad, the eyes rather small; palpi testaceous, the last joint of the maxillary pair more than twice as broad as long and somewhat hammer-shaped in the male, elongate-triangular in the female; antennæ very short in both sexes, testaceous, the apical two or three joints slightly darker, joints 3 and 4 narrow, subequal, 5–11

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a little thickened, 5–10 scarcely longer than broad, 11 a good deal longer than 10; prothorax transverse; elytra comparatively short, gradually narrowing from the base; beneath in great part black, the last ventral segments yellow; pygidium very elongate in both sexes, two and a half times the length of the hypopygium; legs more or less testaceous, the hind pair, and also the middle femora, piceous; the hind tibiæ with three sharp ridges—the first extending across the outer face of the tibia, the second one-half shorter, the third very short, subapical; the first joint of the hind tarsi with two rather long oblique ridges, the second joint with one only.

Length to end of the elytra $1\frac{7}{8}$–2, to tip of the pygidium $2\frac{1}{3}$–$2\frac{1}{2}$, millim. (♂ ♀.)

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

Three examples. Easily separable from the other similarly-coloured species, *M. bicinctella* &c., by the first ridge of the hind tibiæ extending obliquely across their outer face to near the base. The first joint of the maxillary palpi in the male, as in *M. palpalis*, is more than twice as broad as long and somewhat hammer-shaped. *M. amica*, Lec., and *M. minuta*, Smith, both from Georgia, have the hind legs formed as in this insect.

65. **Mordellistena nigerrima.** (Tab. XV. figg. 19; 19 *a*, antenna; 19 *b*, hind leg.)

Rather short, slightly cuneiform, moderately broad, above and beneath, the legs (including the hind tibial spurs), palpi, and antennæ black; the pubescence of the upper surface very fine, silky, black. Head broad, short, the eyes large; last joint of the maxillary palpi moderately stout, elongate-triangular, its inner and apical sides about equal in length, the inner apical angle rounded; antennæ extremely short, stout, joints 3 and 4 narrow, very short, equal, 5 about twice as wide as and much longer than 4, 5–11 equal in width, 6–10 transverse, 11 much longer than 10; prothorax transverse; elytra moderately long, subparallel in their basal half; beneath with some cinereous pubescence on the breast and on the base of each ventral segment; pygidium short, stout, conical; the hind tibiæ with three, the first joint of the hind tarsi with two, short, faint ridges near the tip, the second joint of the hind tarsi simple.

Length to end of the elytra $2\frac{3}{4}$–3, to tip of the pygidium $3\frac{1}{8}$–$3\frac{1}{2}$, millim.; breadth $\frac{7}{8}$ millim. (♀.)

Hab. MEXICO, Saltillo in Coahuila (*Dr. Palmer*), Tupataro (*Höge*).

Two examples, apparently both females. The form of the antennæ and the very fine black silky pubescence of the upper surface chiefly distinguish this little species from the other black *Mordellistenæ* here described. The antennæ, palpi, and legs are entirely black. The second joint of the hind tarsi is without ridges.

66. **Mordellistena annulipyga.** (Tab. XV. figg. 20, ♂; 20 *a*, hind leg.)

Comparatively short, cuneiform, above and beneath black, the oral organs, the basal half of the pygidium, and the last ventral segment testaceous; the elytra with two cinereo-pubescent fasciæ—one before, the other beyond the middle, the first broad, angulate on its anterior edge, the second narrower, straight,—for the rest black-pubescent; the pubescence on the head and prothorax cinereous. Last joint of the maxillary palpi piceous, long and stout, scalene-triangular; antennæ obscure testaceous, darker towards the tip, short and slender, joints 3 and 4 subequal, 5–10 a little stouter, not much longer than broad, 5 slightly longer than 4, 11 very much longer than 10; prothorax transverse; elytra comparatively short, gradually narrowing from the base; pygidium elongate, stout, twice the length of the hypopygium; anterior and middle legs testaceous, the hind pair (the spurs excepted) piceous; the hind tibiæ with three, the first joint of the hind tarsi with two, short, oblique, parallel ridges.

Length to end of the elytra $2\frac{1}{2}$, to tip of the pygidium 3, millim. (♀.)

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

One female example. In the arrangement of the elytral pubescence this species resembles *M. palpalis*, from the same sex of which it differs in its larger size, more elongate shape, black head, stouter pygidium, and the very much stouter and more angular apical joint of the maxillary palpi. The pubescence is rather sparse. The second hind tarsal joint is without ridges.

67. **Mordellistena bicinctella.**

Mordellistena bicinctella, Lec. Proc. Ac. Phil. xiv. p. 48[1]; J. B. Smith, Trans. Am. Ent. Soc. x. pp. 85, 90, t. 2. figg. 15, 16[2]; Bull. Brooklyn Ent. Soc. vi. p. 3.

Short, subparallel; the head varying in colour from black with the anterior part testaceous to entirely testaceous; the prothorax black, sometimes paler at the sides; the elytra black, with two flavo-testaceous fasciæ —one a little below the base, interrupted at the suture (formed by an oblique stripe on each elytron), the other postmedian, transverse, uninterrupted; the pygidium testaceous; the pubescence partaking of the ground-colour. Head strongly transverse, the eyes rather small; palpi testaceous, the last joint of the maxillary pair elongate, moderately stout, scalene-triangular in both sexes, its apical side fully as long as the inner side; antennæ pitchy-brown with the basal joints testaceous, or entirely testaceous, very short in both sexes, joints 3 and 4 narrow, short, subequal, 5–11 a little thickened, 5 considerably longer and stouter than 4, 5–10 decreasing in length, 10 as broad as long in the female; prothorax transverse; elytra short, subparallel in their basal half; beneath black, the last ventral segment often testaceous; pygidium elongate, very slender; legs partly testaceous, the hind femora piceous; the hind tibiæ with two short oblique ridges, the first joint of the hind tarsi with one only, near the tip.

Length to end of the elytra $1\frac{2}{3}$–2, to tip of the pygidium 2–$2\frac{1}{2}$, millim. (♂ ♀.)

Hab. North America, Southern States[1 2].—Mexico, Chilpancingo, Teapa (*H. H. Smith*); Guatemala, Capetillo, Zapote (*Champion*).

Eight specimens, agreeing fairly well with the imperfect descriptions of Leconte and Smith. Of the same size and colour as *M. xanthopyga*, which also has very short antennæ in both sexes; but easily distinguishable from it by the ridges on the hind tibiæ being subequal and by the last joint of the maxillary palpi being very similarly formed in the two sexes (in *M. xanthopyga*, ♂, this joint is hammer-shaped). *M. beata* has similarly carinate hind legs; but it has the male maxillary palpi formed as in *M. xanthopyga*. The Zapote specimen is smaller and narrower than the others.

68. **Mordellistena crux.** (Tab. XV. figg. 21; 21 *a*, hind leg.)

Moderately elongate, narrow, subparallel, black; the head narrowly in front, the sides of the prothorax broadly behind, a curved oblique stripe on each elytron some little distance below the base, connected near the suture with a postmedian fascia, and also the extreme margin of the elytra, except at the base, flavo-testaceous; the pubescence partaking of the ground-colour. Head short and broad, the eyes moderately large; palpi testaceous; the last joint of the maxillary pair oblong-ovate, blunt at the apex; antennæ obscure testaceous with the basal joints paler, slender, filiform, moderately long, joints 3 and 4 narrow, subequal, together not so long as the fifth, 5–11 a little stouter, 5–10 elongate, subequal, 11 longer than 10; prothorax transverse; elytra moderately long, subparallel in their basal half; beneath black, the ventral segments with their apical margins testaceous; pygidium elongate, slender; legs in great part testaceous, the hind femora piceous; the hind tibiæ with two very short ridges, the first joint of the hind tarsi with one only, near the tip.

Length to end of the elytra $2\frac{1}{3}$, to tip of the pygidium $2\frac{3}{4}$, millim.

Hab. Guatemala, Calderas, on the slope of the Volcan de Fuego 7000 feet (*Champion*).

One example. Closely resembling the var. γ of *M. mutabilis*, from Chiriqui, but differing from it in having two very short ridges only on the hind tibiæ near the tip, and one only on the first hind tarsal joint; the apical joint of the maxillary palpi is more ovate, the thorax is transverse, the pygidium is a little shorter, &c. The black colour is more extended on the elytra, and the yellow markings are very sharply defined. The form of the palpi, the much longer antennæ, and the more elongate shape distinguish it from *M. bicinctella*. *M. crux* resembles the North-American *M. trifasciata* and its allies in colour, but the carinæ on the hind legs are formed as in *M. bicinctella*.

69. **Mordellistena beata.** (Tab. XV. fig. 22, ♂.)

Short, cuneiform, the head reddish-testaceous, the prothorax flavo-testaceous with a broad black median vitta extending from the base to the apex, the scutellum and elytra black, the latter with a broad oblique flavo-testaceous stripe extending from the shoulders towards the suture, but not reaching it, the pygidium testaceous; the elytra with a sharply defined yellowish-cinereous-pubescent fascia beyond the middle and some similarly coloured pubescence at the base, the rest of the pubescence partaking of the ground-colour. Head short and broad; palpi (♂) testaceous, the last joint of the maxillary pair twice as broad as long, hammer-shaped; antennæ as in *M. palpalis*; pygidium very elongate, two and a half times the length of the hypopygium; beneath black, the last ventral segments testaceous; legs testaceous, the hind femora piceous; the hind tibiæ with two very short ridges (and traces of a third) near the tip, the first joint of the hind tarsi with one only.

Length to end of the elytra 2, to tip of the pygidium $2\frac{1}{2}$, millim. (♂.)

Hab. Mexico, Cuernavaca (*H. H. Smith*).

One male example. Very near *M. palpalis*, but with the elytral punctuation finer and denser; the sides of the thorax broadly, and an oblique stripe extending from the shoulders inwards, flavo-testaceous. As in *M. palpalis*, the postmedian fascia of the elytra is formed entirely by the colour and arrangement of the pubescence; in *M. xanthopyga* it is accompanied by a difference in the ground-colour.

70. **Mordellistena perexigua.**

Comparatively short, cuneiform, narrow, black, coarsely pubescent, the elytra with two broad cinereo-pubescent fasciæ—one before, the other beyond the middle,—the rest of the elytral pubescence blackish-brown, that on the head and prothorax partly cinereous. Head very broad and short; palpi (♂) pitchy-testaceous, the last joint of the maxillary pair twice as broad as long, very stout, hammer-shaped; antennæ (♂) pitchy-brown, very short, joints 3 and 4 slender, 4 slightly stouter than 3, 5–11 a little thickened, 5–7 as broad as long, 8–10 transverse, 11 longer than 10; prothorax transverse; elytra narrowing from the base; beneath black, the venter and the sides of the breast cinereo-pubescent; pygidium elongate, more than twice the length of the hypopygium; legs piceous, the anterior femora and tibiæ testaceous; the hind tibiæ with two very short ridges near the tip, the first joint of the hind tarsi with one only.

Length to end of the elytra 2, to tip of the pygidium $2\frac{1}{2}$, millim. (♂.)

Hab. Guatemala, Calderas 7000 feet (*Champion*).

One male example only. Smaller and narrower than *M. palpalis* (♂); the head

and pygidium black, the legs (the anterior pair excepted) piceous; the antennæ pitchy-brown, much shorter, and with joints 8–10 transverse. The pubescence is long and coarse, and the punctuation is coarse also.

71. **Mordellistena minutissima.** (Tab. XV. figg. 23, ♂; 23 *a*, maxillary palpus; 23 *b*, hind leg.)

Short, cuneiform, the head and prothorax flavo-testaceous, the scutellum and elytra black, the pygidium testaceous; the elytra with two broad, not very distinct, transverse cinereo-pubescent fasciæ—one before, the other beyond the middle,—the rest of the pubescence partaking of the ground-colour and rather sparse. Head short and broad, the eyes small; palpi (♂) testaceous, the last joint of the maxillary pair about twice as broad as long, somewhat hammer-shaped; antennæ (♂) very short, testaceous, joints 3 and 4 narrow, subequal, 5–11 a little thickened, 5–10 almost as broad as long, 11 much longer than 10; prothorax transverse; elytra comparatively short, gradually narrowing from the base; beneath black, the head and prothorax excepted, the last ventral segment testaceous; pygidium very long and slender, more than twice the length of the hypopygium; legs flavo-testaceous, the hind femora piceous; the hind tibiæ and the first joint of the hind tarsi with two very short faint ridges near the tip.

Length to end of the elytra $1\frac{1}{3}$–$1\frac{1}{2}$, to tip of the pygidium $1\frac{2}{3}$–2, millim. (♂.)

Hab. Guatemala, near the city, San Gerónimo (*Champion*).

Three male examples. Smaller than the smallest example of *M. palpalis*; the head and thorax entirely flavo-testaceous, the antennæ shorter and more slender. This and *M. pulicaria* are perhaps the smallest species of the genus yet described.

72. **Mordellistena palpalis.** (Tab. XV. figg. 24, ♂; 24 *a*, maxillary palpus, ♂; 24 *b*, maxillary palpus, ♀.)

Stout, cuneiform, black, the head reddish-testaceous, the pygidium reddish or testaceous, the elytra with two not very distinct cinereo-pubescent fasciæ—one post-basal, the other post-median,—the rest of the pubescence rather sparse and partaking of the ground-colour; the elytral punctuation coarse. Head broad and short, the eyes rather small; palpi testaceous, the last joint of the maxillary pair usually darker at the tip, the latter more than twice as broad as long and somewhat hammer-shaped in the male, elongate-ovate with the apex obliquely truncate in the female; antennæ very short in both sexes, testaceous, joints 3 and 4 about equal in length, 4 wider than 3, shorter and narrower than 5, 5–11 a little thickened, 5–10 decreasing a little in length, 8–10 as broad as long in the female, 11 considerably longer than 10; prothorax transverse; elytra gradually narrowing from the base; beneath black, the last ventral segment testaceous or reddish; pygidium long and slender in the male, shorter in the female, twice the length of the hypopygium; legs in great part testaceous, the hind femora piceous or brownish; the hind tibiæ with two or three (including the subapical one, the basal one often indistinct or obliterated), and the first joint of the hind tarsi with one or two, very short oblique ridges at the tip.

Length to end of the elytra 2-$2\frac{1}{4}$, to tip of the pygidium $2\frac{1}{2}$, millim. (♂ ♀.)

Hab. Mexico, Teapa (*H. H. Smith*); Guatemala, San Gerónimo and San Juan in Vera Paz (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Volcan de Chiriqui (*Champion*).

Eight examples. This is one of a little group of species, all of which are of very small size, and have the apical joint of the maxillary palpi very broad and somewhat hammer-shaped in the male, the hind tibiæ with two or three very short ridges near the tip only, the antennæ very short in both sexes, and the elytra spotted or with

cinereo-pubescent fasciæ. The pubescence of the elytra is rather sparse and the punctuation comparatively coarse. *M. palpalis* belongs to the subgenus *Tolida*, Muls., as defined by Emery.

73. **Mordellistena pulicaria.**

Short, cuneiform, black, finely pubescent, the elytra with two cinereo-pubescent fasciæ—one basal, the other postmedian,—the rest of the pubescence partaking of the ground-colour. Head short and broad; palpi (♀) fusco-testaceous, the last joint of the maxillary pair oblong-ovate with the apex obliquely truncate; antennæ (♀) fusco-testaceous, very short, joints 3 and 4 narrow, subequal, 5–11 a little thickened, 5–10 as broad as long, 11 longer than 10; prothorax transverse; elytra short, gradually narrowing from the base; beneath black, the sides of the breast in front and of the venter cinereo-pubescent; pygidium moderately long; legs piceous, the anterior pair obscure testaceous, the hind tibial spurs testaceous; the hind tibiæ with two ridges towards the tip—the first obliquely extending across the outer face of the tibia, the other short, subapical; the first joint of the hind tarsi with a single ridge.

Length to end of the elytra $1\frac{1}{3}$, to tip of the pygidium $1\frac{2}{3}$, millim. (♀.)

Hab. Guatemala, Zapote (*Champion*).

Though we have but a single female example of this little insect, I do not hesitate to give it a name. It comes nearest to *M. perexigua*, but differs from that species in its finer pubescence, smaller head, and shorter elytra, the latter with the anterior fascia at, not below, the base. The pygidium is also shorter, and the first ridge on the hind tibiæ extends across their outer face. The species is of about the same size and build as *M. minutissima*.

74. **Mordellistena fasciculata.** (Tab. XV. figg. 25; 25 *a*, maxillary palpus.)

Very elongate, narrow, subparallel, black, the sides of the prothorax narrowly and the pygidium reddish; the prothorax with the base narrowly and an indistinct line on either side of the disc, the scutellum, and numerous small, transverse, partly confluent spots scattered irregularly all over the elytra golden-pubescent, the rest of the pubescence on the prothorax and elytra black, that on the head yellowish, the pubescence coarse and somewhat dense. Head rather small, the eyes not very large; palpi very elongate, testaceous, the last joint of the maxillary pair elongate-triangular, moderately stout, its inner and apical sides about equal in length and very much shorter than the outer side, the latter slightly concave, the apical side rounded; antennæ obscure testaceous, very slender, filiform, moderately elongate, joint 3 narrow, short, 4 considerably longer than 3, 5 longer than 4 or 6, 5–11 elongate, 6–10 subequal, 11 longer than 10; prothorax transverse, much wider than the head; elytra very elongate, more than four times the length of the prothorax, subparallel in their basal half; beneath black, the apical margin of each ventral segment testaceous; pygidium elongate, slender, more than twice the length of the hypopygium; legs testaceous, the middle and hind femora, the hind tibiæ in part, and the extreme tips of the tarsi piceous; the hind tibiæ with a short subapical ridge only; the first joint of the hind tarsi with traces of several oblique ridges.

Length to end of the elytra 3–4, to tip of the pygidium $3\frac{1}{2}$–$4\frac{1}{2}$, millim.; breadth $\frac{7}{8}$–$1\frac{1}{8}$ millim.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Two examples, probably females. This peculiar species has a subapical ridge only to the hind tibiæ, and in this respect agrees with *Mordella*; but it evidently belongs to *Mordellistena*, the following closely allied form being intermediate between it and those species with the ridges on the hind legs not very sharply indicated. The larger

size, the very elongate elytra, and the long testaceous antennæ distinguish it from *M. festiva*, apart from the differences in the sculpture of the hind tibiæ and tarsi.

75. **Mordellistena festiva.** (Tab. XV. figg. 26, ♂; 26 *a*, hind leg.)

Elongate, very narrow, parallel, the head (the eyes excepted), prothorax, antennæ, and palpi clear testaceous, the elytra black, each with a small obscure testaceous spot in the middle at the base, the pygidium reddish-testaceous; the elytra with numerous transverse, partly confluent, yellowish-cinereous-pubescent spots scattered over the surface, these spots tending to form fasciæ, the scutellum with similarly coloured pubescence, that on the rest of the surface partaking of the ground-colour. Head moderately large; palpi as in *M. fasciculata*; antennæ moderately long, filiform, joints 3 and 4 short, subequal, 5–11 elongate, a little thickened, 5–10 subequal, 5 nearly twice as long as 4; prothorax transverse; elytra elongate, subparallel to beyond the middle; beneath black, the head, prothorax, front of the breast, and apex of each ventral segment testaceous; pygidium very long, slender; anterior and middle legs entirely flavo-testaceous, the hind pair a little darker, the hind femora piceous; the hind tibiæ with a short subapical ridge and indications of a faint carina along the dorsal edge; the first joint of the hind tarsi with three, the second joint with two, very faint, oblique, parallel ridges.

Length to end of the elytra 3, to tip of the pygidium 4, millim.; breadth 1 millim. (♂.)

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

One male example. Closely allied to *M. fasciculata*, from which, apart from colour, it differs by its relatively shorter elytra, rather stouter antennæ, the fourth joint of which is only about half the length of the fifth, and the more fasciate arrangement of the pubescence. Viewed in certain lights, the hind tibiæ seem to have a faint carina along the dorsal edge.

Fam. RHIPIDOPHORIDÆ.

Three genera only of this group are known to me as yet from Central America; two of these, *Emenadia* and *Rhipidophorus*, are common to North and South America, but the third, *Pelecotomoides*, does not extend north of the Mexican State of Vera Cruz. It is probable that *Toposcopus* will eventually be found in Northern Mexico; it has the eyes completely divided and the claws serrate. A good deal of diversity of opinion exists amongst authors as to the application of the generic names in this family; the Munich Catalogue is here followed.

PELECOTOMOIDES.

Pelecotoides, Castelnau, Hist. Nat. Ins. Col. ii. p. 263 (1840).

Trigonodera, Dejean, Cat. 3rd edit. p. 239 (1837); Gerstäcker, Rhipiph. Col. Fam. Disp. Syst. p. 2 (1855); Lacordaire, Gen. Col. v. p. 620.

Pelecotomoides, Gemminger & Harold, Cat. vii. p. 2118.

This genus is chiefly confined to Tropical America and Australia. Gerstäcker in his "Monograph" enumerated thirteen species as belonging to it, but he appears to have overlooked those described by Shuckard and Blanchard. Four are now recorded from

within our limits, but of all of them very insufficient material has been obtained. The great variation in the colour of the pubescence in certain species has been noted by Lacordaire; and large series of most of them are required before the specific variation can be properly understood. The males and females of two species only were known to Gerstäcker.

Our species may be tabulated thus:—

Eyes very large, coarsely granulated, approximate; antennæ with the four basal joints simple (the fourth angularly produced within in the male). . . . . *nubila.*
Eyes smaller, more finely granulated, distant.
Antennæ with the three basal joints simple . . . . . *lineata.*
Antennæ with the five basal joints simple . . . . . *bivittata.*
Antennæ with the four basal joints simple, the fifth acutely produced within . . . . . *nebulosa.*

1. **Pelecotomoides nubila.** (Tab. XVI. figg. 1, ♂; 2, 2 *a*, ♀.)

Trigonodera nubila, Gerst. Rhipiph. Col. Fam. Disp. Syst. p. 4 (♂)[1].

Hab. Mexico, Tehuantepec (*Sallé*); Nicaragua, Chontales (*Belt*); Panama, Bugaba (*Champion*).—Peru [1].

Five specimens—a pair from Tehuantepec, a female from Chontales, and a pair from Bugaba,—agree so nearly with Gerstäcker's description of *P. nubila* that there can be little doubt they belong to his species. The eyes are very large, feebly emarginate, coarsely granulated, and in both sexes only separated by a narrow raised line. The antennæ have their four basal joints simple; the second and the fourth joints are very short in the male, a little longer in the female; joints 5–11 have each a very elongate ramus in the male, and are very acutely serrate in the female. The Panama specimens have the elytral pubescence interrupted by ill-defined transverse or oblong patches of a fuscous colour, the other examples being uniformly yellowish grey-pubescent. Gerstäcker particularly notices the "fronte inter oculos lineari" as characteristic of his *P. nubila*; the male only of the species was known to him. Our specimens vary in length from 6–11 millim.

2. **Pelecotomoides lineata.** (Tab. XVI. figg. 3, 3 *a*, ♀.)

♀. Moderately elongate, brown, the elytra darker, densely and finely punctured, thickly pubescent; the pubescence on the head and prothorax golden or greyish-yellow, the prothorax with a well-defined median vitta (narrowed before and behind), and in one specimen a small oblong spot at the sides about the middle, brown-pubescent; the pubescence on the scutellum and elytra brown, the latter with a narrow, well-defined, longitudinal stripe extending obliquely from a little below the base to the suture just before the apex (and widening a little posteriorly) golden- or greyish-yellow-pubescent. Head small; the eyes widely separated, deeply emarginate, finely granulated; antennæ pitchy-brown with the three basal joints reddish, rather short, joints 1–3 narrow, 2 very short, 3 about twice as long as 2, subtriangular, 4–10 very strongly serrate; prothorax convex, about as long as broad, with the sides rapidly converging from the base, almost straight, a little rounded in front only, the hind angles acute, the basal lobe shallowly emarginate in the

middle; elytra moderately long, gradually narrowing from the base, rounded at the apex; legs and under surface pitchy-brown or reddish, the latter densely pubescent.

Length $7\frac{3}{4}$–10 millim.

Hab. Mexico, Jalapa (*Höge*).

Two female examples. *P. lineata* differs from all the species described by Gerstäcker in having the three basal joints only of the antennæ simple.

3. **Pelecotomoides bivittata.**

Pelecotomoides bivittata, Chevr. in litt.

♀. Closely resembling the same sex of *P. lineata*, but differing as follows:—The antennæ entirely reddish, with the five basal joints simple—2 and 3 very short, 4 and 5 wider, about as broad as long, 5 a little wider than 4,—6–10 very strongly serrate, 6 twice as wide as 5; the brownish-pubescent median vitta of the prothorax more dilated at the middle and less sharply defined; the longitudinal golden-pubescent vitta on each elytron wider and less oblique, extending inwards in front and reaching the base, the brown pubescence on the rest of the surface with intermixed golden hairs.

Length $8\frac{1}{2}$ millim.

Hab. Mexico, Cordova (*Sallé*).

One female example. Closely resembling the same sex of *P. lineata*, but differing from it by the small non-serrate fourth and fifth joints of the antennæ. This specimen has the seventh antennal joint on one side abnormally formed, it being biserrate. *P. bivittata* agrees in some respects with the description of *P. bistriata* (Gerst.), from Peru; but it cannot be satisfactorily identified therewith. As in *P. lineata,* the elytral stripes are confluent at the suture a little before the apex.

A second specimen from Cordova (*Sallé*) has the upper surface very densely and uniformly greyish-yellow-pubescent; it may be a variety of *P. bivittata*, or it may be referable to *P. helva*, Perty (the figure of which it closely resembles), but as the antennæ are broken off it is impossible to identify it. *P. helva* (♀), according to Gerstäcker, has the five basal joints simple, the third joint twice as long as the second.

4. **Pelecotomoides nebulosa.** (Tab. XVI. figg. 4, 4 *a*, ♀.)

♀. Moderately elongate, rather broad, brown or blackish-brown, thickly pubescent, densely and finely punctured; the pubescence yellowish-grey, more or less mottled with fuscous (the dark hairs showing a tendency to form a median patch on the prothorax, and transverse, irregular, partly confluent patches on the elytra). Head small; the eyes widely separated, deeply emarginate, finely granulated; antennæ rather short, black or piceous, with the five basal joints more or less rufous, joints 2, 4, and 5 very short, 3 about twice as long as 2, 5 acutely produced within, 6–10 very strongly serrate, 6 nearly twice as long and twice as wide as 5; prothorax convex, about as long as broad, with the sides a little rounded and rapidly converging from the base, the hind angles acutely produced behind, the basal lobe emarginate in the middle; elytra moderately long, gradually narrowed from the base, a little flattened on the disc anteriorly, obtuse at the apex, the apices slightly divergent and somewhat angular; beneath brown or reddish-brown, densely cinereo-pubescent, the apical ventral segment with some brown pubescence at the tip; legs pitchy-brown or reddish, the tibial spurs black.

Length $7\frac{1}{2}$–11 millim.

Hab. Panama, Taboga I. (*Champion*).—Colombia (*coll. F. Bates*).

Three examples, all females. A specimen of the same sex, from Brazil, in Mr. F. Bates's collection (from that of Dejean), labelled *Trigonodera nebulosa*, is no doubt a variety of the same species; it has the pubescence of the upper surface golden-brown, with the base of the thorax and some markings at the base of the elytra, and a few small spots on the disc of the latter, whitish. The description of *Trigonodera pallipes*, Gerst., based upon a male example from Brazil, nearly agrees with the present insect as regards the form of the antennæ; but Gerstäcker says "articulo primo oblongo-triquetro, sequentibus quatuor transversis," a definition not applicable to *P. nebulosa* (♀).

EMENADIA.

Ripiphorus, Fabricius, Ent. Syst. i. 2, p. 109 (1792) (part.).

Macrosiagon, Hentz, Trans. Am. Phil. Soc. iii. p. 462, t. 15. figg. 3 *a–d* (1830).

Emenadia, Castelnau, Hist. Nat. Ins. Col. ii. p. 261 (1840); Lacordaire, Gen. Col. v. p. 627; Gemminger & Harold, Cat. vii. p. 2120.

Rhipiphorus, Gerstäcker, Rhipiph. Col. Fam. Disp. Syst. p. 19 (1855); Horn, Trans. Am. Ent. Soc. v. p. 121.

This genus is represented in most parts of the world, and several of its members are extremely variable in colour. Some of the American species are very widely distributed, and out of the eight enumerated by Dr. Horn in his excellent monograph of the species of the United States (*op. cit.* pp. 121–125), no less than six occur within our limits; of these latter one only was noticed by Gerstäcker as from Mexico. Four other species are also recorded here from Mexico or Central America, two of which are described as new. The important structural characters to be found in the form of the prosternum and in the anterior and hind tarsi are noticed by Dr. Horn; they seem to have been entirely overlooked by Gerstäcker. The name *Macrosiagon*, Hentz, though it is ten years earlier than that of Castelnau, has not been adopted by authors. The Central-American species may be tabulated thus:—

Anterior coxæ contiguous towards the tip; vertex very much raised.
- Basal lobe of the thorax with a strong, acute, transverse elevation, the space between this and the tip deeply excavate . . . . . Species 1.
- Basal lobe of the thorax moderately raised or convex.
  - The thorax with a very deep, abrupt, triangular excavation on either side of the disc towards the base; elytra strongly dehiscent, very acute at the tip . . . . . Species 2.
  - The thorax with a longitudinal groove on either side of the disc behind.
    - The elytra long, sharply pointed, moderately dehiscent . . . . Species 3.
    - The elytra shorter, more obtuse at the tip, strongly dehiscent . . Species 4.
- Basal lobe of the thorax not raised, faintly carinate or with a smooth central line, notched at the tip . . . . . Species 5–8.

Anterior coxæ separated by a narrow prolongation of the prosternum.

Vertex moderately raised; basal lobe of the thorax not raised, triangular; elytra long and acuminate . . . . . Species 9.

Vertex feebly raised; basal lobe of the thorax quite flat, very broad, almost rounded behind; elytra short, obliquely truncate at the tip, the inner apical angle rounded . . . . . Species 10.

1. **Emenadia flavipennis.** (Tab. XVI. figg. 5, 5 *a*, ♀.)

Macrosiagon flavipennis, Lec. New Sp. Col. p. 153 (♂)[1].
Rhipiphorus flavipennis, Horn, Trans. Amer. Ent. Soc. v. p. 122[2].
Macrosiagon abdominalis, Lec. New Sp. Col. p. 154 (♀)[3].

Hab. North America, New York[1], Missouri[1], Middle States[3], Pennsylvania[2], Illinois[2], Georgia[2], California[2].—Mexico, Villa Lerdo in Durango (*Höge*).

One female specimen from Durango, agreeing very closely with Dr. Horn's description[2]. It is black, with the abdomen red and the elytra with a broad pale yellow fascia immediately below the base; the median lobe of the thorax is strongly raised just before the base, and the space between this and the tip is transversely hollowed; the second joint of the hind tarsi is simple, and slightly shorter than the third.

2. **Emenadia bifoveata.** (Tab. XVI. fig. 6, ♂.)

Rhipiphorus bifoveatus, Horn, Trans. Am. Ent. Soc. v. p. 123 (♂)[1].

Hab. North America, Illinois[1].—Mexico, Oaxaca (*Höge*); Guatemala (*ex coll. Horn; Sallé*), Chimaltenango (*Conradt*); Nicaragua (*Sallé*).

A Guatemalan example of this insect has been kindly communicated by Dr. Horn. The species is apparently not uncommon in Mexico and Guatemala, whence we have received upwards of twenty specimens. The elytra are described[1] as "brownish, gradually becoming black at the base, a small arcuate space one-fourth from the humerus pale luteous:" two-thirds of the specimens received have the elytra entirely black, the others having them coloured as described by Dr. Horn. The thorax has a large, very deep, triangular fovea on either side of the disc before the base, the space between the foveæ appearing to be longitudinally raised, this elevation extending down the median lobe to the tip, which is transversely notched. The second joint of the hind tarsi is shorter than the third, and broadly dilated. The anterior coxæ are separated for half their length by a prolongation of the prosternum. Our specimens vary from $7\frac{1}{2}$ to $13\frac{1}{2}$ millim. in length. *E. bifoveata* was described from a single male example.

3. **Emenadia excavata.** (Tab. XVI. figg. 7, ♂; 8, ♀, var.)

Elongate, rather narrow, moderately shining; the head and prothorax black, pitchy-red, or rufous; the elytra testaceous or flavo-testaceous with the base, the sutural and lateral margins, and a sublateral stripe—

extending from the apex to a short distance below the base, and widening anteriorly (in one example extending to the base)—more or less black or piceous, these markings abbreviated posteriorly in light-coloured examples, but always distinct, the base sometimes rufous; antennæ in the male testaceous or reddish with the rami fuscous or black, in the female black with the two basal joints reddish-testaceous; beneath varying in colour from black to ferruginous, the metasternal epimera and the hind coxæ flavous behind; legs varying in colour from black to rufous with the knees and the tips of the tarsi piceous, the claws yellow. Head finely and sparsely punctured anteriorly, the vertex almost smooth and very much raised, the front moderately convex, the epistoma truncate, the occiput confusedly punctured, slightly concave; prothorax about one-third longer than broad, rapidly narrowing from the base, the sides sinuate behind the middle, the hind angles sharp but not prolonged backwards, the surface thickly and somewhat coarsely (in some specimens quite finely) punctured, the disc with a broad and rather deep longitudinal groove on either side extending from the base to about the middle, the intermediate space strongly convex, the basal lobe equilaterally-triangular, obsoletely carinate or slightly raised, and usually (but not always) transversely notched at the tip, the tip obtuse; elytra long, sharply pointed at the apex, becoming gradually dehiscent from a little below the base, punctured like the prothorax, but with a deep longitudinal channel on the disc of each almost impunctate, this channel accompanied externally by a more or less elevated ridge or carina; beneath sparsely, the legs thickly, punctured; anterior coxæ separated for about half their length by a narrow prolongation of the prosternum, contiguous behind; second joint of the hind tarsi broadly flattened, a little shorter than the third joint; anterior tarsi in the male with joints 2–4 thickly pubescent beneath.

Length 4¾–9 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Cordova, Capulalpam, Cuernavaca (*Sallé*), Chilpancingo, Oaxaca, Minatitlan, Jalapa (*Höge*).

Of this species, the commonest of the genus in Mexico, we have received forty-one examples: out of this number three only are of the male sex. Though very variable as regards the colour of the head, thorax, under surface, and legs, *E. excavata* is unusually constant in the colour and markings of the elytra, these latter only varying in the predominance of the yellow or of the black, the markings being always distinct. *E. excavata* is nearest allied to *E. bifoveata* (Horn), from which it differs, apart from the colour and markings of the elytra, by the shallower, longer, and much less abrupt depression on either side of the disc of the thorax behind; also by its narrower general shape, and less dehiscent and less acuminate elytra. The punctuation of the head and thorax is rather variable; the vertex is usually almost smooth, at most sparsely punctured. The basal lobe of the thorax is obsoletely carinate or a little raised, the convexity of the median portion of the disc being continued to the tip, the latter being transversely notched in some examples, and unimpressed in others. The anterior and hind tarsi are formed as in *E. bifoveata*. The species cannot be identified with any of those described by Gerstäcker.

4. **Emenadia carinipennis.** (Tab. XVI. fig. 9, ♂.)

Moderately elongate, rather dull, the vertex and elytra shining; black, the elytra yellow, with the base narrowly black, the suture and lateral margin reddish, and the sublateral carina piceous; beneath black, with the metasternal epimera and the posterior coxæ flavous behind, and the apex of each ventral segment testaceous; legs reddish-testaceous, with the femora piceous; antennæ brownish-yellow, with the extreme tips of the rami infuscate. Head with the front sparsely, the epistoma and occiput thickly and finely, punctured, the top of the vertex smooth, the latter very much raised, the front convex but somewhat

flattened above and a little depressed between the points of insertion of the antennæ; prothorax about one-third longer than broad, rapidly narrowing from the base, the sides slightly flexuous, the hind angles rather obtuse, the surface thickly and somewhat coarsely punctured, the disc with a broad shallow longitudinal groove on either side extending from the base to about the middle, the intermediate space feebly convex, the basal lobe broadly triangular, slightly raised, but not notched at the tip; elytra, at the base excepted, very sparsely punctured, moderately long, pointed but not acuminate at the tip, becoming rapidly dehiscent from the basal third, the disc of each with a broad, almost smooth longitudinal groove, this groove limited laterally by a rather sharp carina which extends from the apex upwards to about one-fourth from the base; beneath and the legs finely and somewhat thickly punctured; anterior coxæ contiguous towards the tip; second joint of the hind tarsi broadly flattened, a little shorter than the third joint; anterior tarsi in the male with joints 2–4 finely pubescent beneath.

Length $8\frac{1}{2}$ millim. (♂.)

Hab. Mexico, Yautepec in Morelos (*Höge*).

One male example. Closely allied to *E. excavata*, but differing as follows:—Broader and less elongate; the elytra much more sparsely punctured, more dehiscent posteriorly, less sharply pointed at the tip, and with a well-defined sublateral carina, the base only black; the longitudinal groove on either side of the disc of the thorax behind shallower, the intermediate space much less convex; the vertex a little flattened in front; the antennæ, the extreme tips of the rami excepted, brownish-yellow; the legs reddish-testaceous, with the femora piceous. In its general shape *E. carinipennis* more nearly resembles *E. bifoveata*.

5. **Emenadia octomaculata.** (Tab. XVI. fig. 10, ♂, var.)

Rhipiphorus octomaculatus, Gerst. Rhipiph. Col. Fam. Disp. Syst. p. 22 [1]; Horn, Trans. Am. Ent. Soc. v. p. 123 [2].

Emenadia octomaculata, Fleut. & Sallé, Ann. Soc. Ent. Fr. 1889, p. 432 [3].

Ripiphorus diffluens (Lac.), Dej. Cat. 3rd edit. p. 240 [4].

Rhipiphorus bicolor, Say, Journ. Acad. Phil. iii. p. 275 (1823) [5]; Complete Writings, ii. p. 162 [6] (nec Oliv.).

Rhipiphorus sayi, Lec. Journ. Acad. Phil. (2) iv. p. 21 (1858) [7].

Rhipiphorus puncticeps, Lec. loc. cit. p. 20 [8].

Hab. North America [5 8], Illinois [1], Kansas [2], Georgia [2], Florida [2], Texas [2].—Guatemala, San Gerónimo (*Champion*), Chamiquin, Chimaltenango (*Conradt*).—South America, Cayenne [4], Pernambuco [1], Bahia [1]; Antilles, Guadaloupe [3].

Of this variable and very widely distributed species we have three male examples from Guatemala. These specimens have the thorax, elytra, and legs (the tarsi excepted) ferruginous, the thorax with a large oblong patch on either side of the disc, the elytra each with three spots—one humeral, one median, and one apical; the apical spot is evanescent in two out of the three examples. According to Horn [2], *E. bicolor* (Say) (=*E. sayi*, Lec.) and *E. puncticeps* (Lec.) are varieties of *E. octomaculata*.

We figure a male from San Gerónimo.

6. **Emenadia rubropicta.**

Rhipidophorus rubropictus, Perty, Del. anim. artic. Bras. p. 66, t. 13. fig. 12[1].
Rhipiphorus rubropictus, Gerst. Rhipiph. Col. Fam. Disp. Syst. p. 22[2].

Hab. Panama, Caldera in Chiriqui (*Champion*).—Brazil [1 2].

A single female specimen, differing from *E. octomaculata* in its larger size, stouter build, and coarser sculpture, is, no doubt, referable to *E. rubropicta* (Perty).

7. **Emenadia pectinata.** (Tab. XVI. fig. 11, ♂, var.)

Mordella pectinata, Fabr. Syst. Ent. p. 263[1].
Rhipiphorus pectinatus, Horn, Trans. Am. Ent. Soc. v. p. 124[2].
Mordella sex-maculata, Fabr. loc. cit. p. 263[3].
Ripiphorus sex-maculatus, Oliv. Ent. iii. no. 65. p. 7, t. 1. fig. 6[4].
Rhipiphorus varicolor, Gerst. Rhipiph. Col. Fam. Disp. Syst. p. 25[5].
(For the rest of the synonymy, see Horn, op. cit.)

Hab. North America[5], New York to Kansas[2], Carolina[5].—Mexico, Durango city (*Höge*); Guatemala, Chimaltenango (*Conradt*).

A male from Mexico and a pair from Guatemala agree with Dr. Horn's description of *E. pectinata*: they have the under surface more sparsely punctured than in *E. octomaculata*. In the two males the elytra are yellow, with the base, a median lateral spot, and the apex black; in the female the elytra are black and the abdomen is red. The median lobe of the thorax is transversely notched at the tip. The second joint of the hind tarsi is broadly dilated, shorter than the third.

This extremely variable species seems to have been described under no less than fifteen different names.

8. **Emenadia cruenta.** (Tab. XVI. fig. 12, ♀.)

Rhipiphorus cruentus, Germ. Ins. Spec. nov. p. 168 (1824)[1]; Gerst. Rhipiph. Col. Fam. Disp. Syst. p. 27[2]; Horn, Trans. Am. Ent. Soc. v. p. 124[3].
Ripiphorus rufus, Lec. Proc. Acad. Phil. vii. p. 225[4].

Hab. North America [1 2], Georgia to California[3], San Diego[4].—Mexico[2], Guanajuato (*Sallé*).

One female example from Guanajuato, agreeing with Dr. Horn's description[3]. It is black, with the abdomen and elytra rufous, the latter with the base narrowly, and the apex broadly, black; the median lobe of the thorax is not notched at the tip; the second joint of the hind tarsi is slender, much longer than the third.

9. **Emenadia limbata.** (Tab. XVI. figg. 13, 14, ♂; 15, 16, ♀.)

Ripiphorus limbatus, Fabr. Ent. Syst. i. 2, p. 112[1]; Oliv. Ent. iii. no. 65, p. 6, t. 1. figg. 5 *a*, 5 *b*[2].
Rhipiphorus limbatus, Say, Bost. Journ. Nat. Hist. i. p. 189[3]; Complete Writings, ii. p. 660[4]; Gerst. Rhipiph. Col. Fam. Disp. Syst. p. 30[5]; Horn, Trans. Am. Ent. Soc. v. p. 125[6].

Hab. North America[5], United States[3], Pennsylvania to Texas[6].—Mexico, Xucumanatlan (*H. H. Smith*), Cuernavaca, Guanajuato, Orizaba (*Sallé*), Chilpancingo, Cerro de Plumas (*Höge*); Guatemala (*Sallé*); Costa Rica, Caché (*Rogers*); Panama, Volcan de Chiriqui (*Champion*).

We have received about twenty specimens of this extremely variable species, all but three of which are from Mexico: of these, six are black; two are black, with the thorax rufous; two are black, with the head and thorax rufous; two are black, with the disc of the elytra (and the sides of the thorax also in one specimen) partly rufous; five have the thorax and elytra flavo-testaceous or stramineous, the former broadly marked with black on the anterior half of the disc and the latter with the sutural and lateral margins and the base black; one (from Chiriqui) has the thorax and elytra entirely stramineous; two are rufous, with the base or apex of the elytra black. The anterior coxæ are narrowly separated by the prosternum; the head is almost smooth, with the vertex only moderately raised; the second joint of the hind tarsi is a little widened, not or very little more than half the length of the third.

The representatives in the Sallé collection are separated into five species. I am indebted to Dr. Horn for an example of *E. limbata* for comparison. We figure four specimens, all from Mexico.

10. **Emenadia discicollis.** (Tab. XVI. figg. 17, ♀; 18, ♀, var.)

Rhipiphorus discicollis, Gerst. Rhipiph. Col. Fam. Disp. Syst. p. 32 (♀)[1].
Rhipiphorus mutilatus, Gerst. loc. cit. (♀)[2].
Rhipiphorus 4-maculatus, Gerst. loc. cit. p. 33 (♂)[3].
Emenadia melanoptera, Chevr. Bull. Soc. Ent. Fr. 1877, p. ix[4].
Emenadia vitraci, Fleut. & Sallé, Ann. Soc. Ent. Fr. 1889, p. 432[5].

Hab. Mexico (*ex coll. Sturm; Mus. Brit.*), Ventanas in Durango (*Forrer*), Temax in North Yucatan (*Gaumer*).—Colombia[2]; Brazil[1]; Antilles, Cuba[3], Porto Rico[4], Guadaloupe[5] (*Mus. Brit.*).

We have received four female specimens of an *Emenadia* from Mexico agreeing very well with Gerstäcker's description of *E. discicollis*[1], and there is also a Mexican example of the same species in the British Museum. In three of these the elytra are black with a slight bluish tint in certain lights, and the thorax is rufous or reddish-testaceous with the disc to a variable extent black; one (from Sturm's collection) is reddish-testaceous above and beneath, with the apices of the elytra black; one (in the

British Museum) is reddish-testaceous, with the base of the elytra very broadly and also a large apical patch black.

E. mutilata (Gerst.), from Colombia, is stated [2] by its author to differ from *E. discicollis* by its smaller size and by having the head and prothorax entirely rufous; it is, no doubt, a variety of *E. discicollis*. *E. 4-maculata* (Gerst.), from Cuba, is rufous, with the anterior half of the thorax and the base and apex of the elytra black. *E. vitraci*, Fleut. & Sallé, from Guadaloupe, of which I have examined two examples—a male (agreeing precisely in colour with *E. 4-maculata*, Gerst.) kindly communicated by M. Fleutiaux and a female in the British Museum,—belongs to the same species. *E. melanoptera*, Chevr., from Porto Rico, agrees with *E. mutilata* (Gerst.) in colour. The species in all its varieties may be easily separated from the other Central-American forms by its comparatively short, obliquely truncate elytra, the inner apical angles of which are rounded, very fine punctuation, and shining surface; the head is smooth and very shining, and has the vertex very little raised; the outer lobes of the maxillæ are greatly elongated; the anterior coxæ are narrowly separated by the prosternum; the second joint of the hind tarsi is dilated, not more than half the length of the third. As in several other members of the genus, the colour is exceedingly variable, and of no value whatever as a specific character.

RHIPIDOPHORUS.

Rhipiphorus, Bosc d'Antic, Journ. d'Hist. Nat. ii. p. 293 (1792) (nec Lacordaire, Horn, &c.).
Myodes, Latreille, Nouv. Dict. d'Hist. Nat. xxii. p. 130 (1818).
Myodite, Latreille, op. cit. xxix. p. 302, nota (1819).
Dorthesia, Say, Journ. Acad. Phil. iii. p. 274 (1823); Complete Writings, ii. p. 162.
Myodites, Gerstäcker, Rhipiph. Col. Fam. Disp. Syst. p. 15 (1855); Lacordaire, Gen. Col. v. p. 630; Leconte, Trans. Am. Ent. Soc. viii. p. 210.
Rhipidophorus, Gemminger & Harold, Cat. vii. p. 2123.

This widely distributed and exceedingly interesting genus is well represented in North and Central America, but from south of the Isthmus of Panama a single species only, *R. rugosus* (Waterh.), has been recorded as yet. Leconte in his monograph (*op. cit.*) enumerated eleven species from the United States, and mentions two others from North America as being unidentified by him; but it is more than probable that several of these are not really distinct. Seven are here enumerated from Central America. The species of this genus are exceedingly rare in collections, and the majority of them have been described from single examples only. The European *R. subdipterus*, Bosc, is parasitic upon *Halictus sexcinctus*, Latr., according to Fabre; and it is probable that the other members of the genus are of similar parasitic habits. In two of the species here described the abdomen apparently has a sharp carina along the centre of the dorsal segments, but this may be partly due to contraction after death. In one group of species the first joint of the hind tarsi is short, stout, and very much compressed;

viewed laterally this joint appears to be very obliquely truncate at the apex, owing to the deep apical emargination. In one species, *R. rex*, the anterior coxæ (and the middle coxæ also to a less extent) have a hairy process on the inner side towards the base.

The abdomen in the European *R. subdipterus* differs in colour in the two sexes; in *R. tuberculatus* and *R. niger*, however, the only species of which we possess males and females, there is little or no variation in this respect.

* *First joint of the hind tarsi short, stout, strongly compressed, very deeply emarginate at the apex; vertex transversely, convexly raised, not tuberculate in the middle.*

1. **Rhipidophorus rex.** (Tab. XVI. figg. 19, ♂; 19 *a*, hind tarsus.)

♂. Very broad, black, rather coarsely pubescent; the elytra, except the extreme base, the ventral surface of the abdomen, except the apex of each segment narrowly, the last two dorsal segments, and the legs, except the knees very narrowly, flavo-testaceous; the antennæ luteous, with the tips of the rami slightly infuscate. Head finely, closely, and irregularly punctured; the vertex transversely and convexly raised in the middle, and with erect yellowish hairs; antennæ with the rami long and very stout; prothorax with an impressed median line and a transverse irregular groove across the disc before the middle, the surface very uneven, finely and closely punctured, the disc almost impunctate anteriorly; elytra deeply sinuate-emarginate on their inner edge, shining, with a few very fine scattered punctures along the sides and at the apex, for the rest smooth; abdomen above and beneath (the first segment excepted) very sparsely and minutely punctured, the dorsal segments (the first excepted) with a very sharply raised carina down the middle; legs stout, comparatively short, the four hinder tibiæ moderately compressed, the middle tibiæ irregularly and rather coarsely serrate on their outer edge; the first joint of the hind tarsi only a little longer than the apical joint, very stout, strongly compressed and much raised, very deeply emarginate at the apex above, the second and third joints short; anterior coxæ with a stout hairy process on the inner side, the middle coxæ with a short and much smaller one; wings hyaline, with a dark fascia beyond the middle extending halfway across, the costa from about the basal third piceous.

Length 10 millim.

Hab. Mexico (*coll. Godman & Salvin*).

One male example. This is perhaps the finest species of the genus yet described. The antennæ (including the rami) and legs are very stout. The dorsal segments of the abdomen (the first excepted) are very sharply carinate down the middle. The anterior coxæ have a stout hairy process on the inner side, this process being of the same yellow colour as the femur, while the coxa itself is black. The first joint of the hind tarsi is very much compressed and raised, the apex (viewed laterally) very oblique.

2. **Rhipidophorus lævicollis.** (Tab. XVI. fig. 20, ♀.)

♀. Black, the head thickly, the under surface (the venter excepted) sparsely pubescent; the elytra entirely, and the abdomen above and beneath, the last segment excepted, reddish-yellow; the antennæ entirely black; the four anterior legs, the extreme base of the femora excepted, and the spurs and claws of the hind legs, reddish-yellow, the rest of the hind pair in great part piceous. Head finely and somewhat thickly punctured, the front concave and very uneven; the vertex broadly, transversely swollen, almost smooth; antennæ comparatively long, the rami unequal in length—very elongate towards the base, much shorter towards the apex; prothorax obsoletely canaliculate in its median third, smooth, except for some

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fine scattered punctures on the basal portion of the disc; elytra shining, with rather coarse, scattered, shallow punctures, the humeri smooth; metasternum sparsely punctured; abdomen above and beneath smooth, almost glabrous, the apical segments only finely and sparsely pubescent; legs stout, the tibiæ widened and strongly compressed; the first joint of the hind tarsi about as long as the following two joints united, stout, very strongly compressed, and deeply emarginate at the apex above, the second joint more than twice as long as the third; wings hyaline, their basal two-thirds suffused with yellow, a transverse fascia beyond the middle and the costa smoky.

Length 9 millim.

Hab. MEXICO, near the city (*Schumann*).

One female example. A large species, readily separable from its allies by the smooth and shining thorax and abdomen; the latter is reddish-yellow, with the apical segment black. In its smooth thorax &c. this species agrees with the description of *R. popenoi* (Lec.), from Colorado, but it differs in numerous particulars; the female only of *R. popenoi* was known to Leconte.

3. **Rhipidophorus flaviventris.** (Tab. XVI. fig. 21, ♂.)

♂. Comparatively narrow, black, pubescent; the elytra piceous, with a broad yellowish fascia (not reaching the outer margin) about the middle, the apical margins reddish; the antennæ fusco-testaceous; the abdomen reddish-yellow, with the base and the extreme apex stained with piceous; the legs black, with the tibial spurs and the claws reddish-yellow. Head closely and rather coarsely punctured, the front concave; the vertex strongly transversely raised in the middle, and thickly clothed with erect fuscous hairs; antennæ with the rami very long and slender; prothorax canaliculate in its median third, thickly and finely punctured at the sides, base, and apex, the disc smooth except for a few coarser punctures about the middle; elytra moderately shining, coarsely and rather thickly punctured, the interspaces minutely punctate, the humeri smooth; abdomen sharply carinate along the middle above from the base to the apex, above and beneath with widely scattered fine punctures, the first two dorsal segments almost smooth; legs stout, the tibiæ broad and compressed; the first joint of the hind tarsi short, not longer than the apical one, very stout, strongly compressed and much raised, very deeply emarginate at the apex above, the second joint also stout and compressed, more than twice as long as the third; wings suffused with yellow throughout, the basal half of the costa reddish-brown, a patch on the costa beyond this smoky.

Length 8½ millim. (♂.)

Hab. GUATEMALA, Cerro Zunil (*Champion*).

One male example. In this species the dorsal surface of the abdomen is carinate along the middle from the base to the apex, the abdomen itself (in the dried specimen) being narrow and parallel; the rami of the antennæ are very slender and curled; the two basal joints of the hind tarsi are compressed, the first joint very strongly so; the elytra are coarsely punctured; and the legs are black, the spurs and claws excepted. The vertex is more strongly raised than in the same sex of *R. rex*.

** *First joint of the hind tarsi elongate, unemarginate at the apex.*

† *Vertex sharply tuberculate in the middle in the male, obsoletely so in the female.*

4. **Rhipidophorus tuberculatus.** (Tab. XVI. figg. 22, ♂; 22 *a*, hind tarsus.)

Black, finely and thickly pubescent; the elytra yellow; the abdomen reddish-yellow, in one specimen of the male with a piceous median dorsal stripe and the apical segments slightly infuscate, in the female with the apical dorsal segment piceous; the antennæ in the male sordid yellow, in the female reddish-testaceous, the tips of the rami darker in both sexes; the legs reddish-yellow, all the femora suffused with piceous towards the base. Head finely and thickly punctured, more sparsely so in the female, the front flattened; the vertex with a very stout, strongly raised, blunt tubercle in the middle in the male, and a much shorter and more angular elevation in the female; antennæ very short in the female, the rami in this sex comparatively short and about equal in length—in the male very long and moderately stout; prothorax in the male densely and finely punctured, with an interrupted smooth central line—in the female more sparsely punctate, with a narrow space on either side of the disc about the middle and a spot behind this near the base smooth; elytra shining, finely and thickly punctured at the base, almost smooth behind; abdomen above and beneath closely and finely punctured; tibiæ moderately compressed; the first joint of the hind tarsi elongate, a little longer than the others united, moderately stout, the second and third joints very short; wings slightly smoky beyond the middle, the costa piceous.

Length $4\frac{1}{2}$–$5\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Atoyac in Vera Cruz (*Schumann*).

One female and two male examples. This species differs from all the others here described by the strongly raised, very stout, blunt tubercle on the vertex in the male sex, this tubercle being replaced in the female by an angular elevation. The abdomen is thickly and finely punctured. The angular elevation on the vertex of the female will easily distinguish *R. tuberculatus* from the same sex of the closely allied *R. simplex*; the latter, moreover, has an angular prominence beneath the point of insertion of each antenna, of which there is no trace in *R. tuberculatus*.

5. **Rhipidophorus niger.** (Tab. XVI. fig. 23, ♂.)

Myodites niger, Waterh. Cist. Ent. i. p. 369[1].

♂. Broad, black, finely pubescent; the elytra piceous, with a broad and rather oblique interrupted fascia a little before the middle, and the apex narrowly, testaceous; the abdomen above with the two basal segments in great part piceous, the broad membranous portion between the first and second and second and third segments yellow, and the following segments black—beneath flavo-testaceous, with the sides only of each segment (the first excepted) black; the antennæ brown, with the rami sordid yellow; the anterior legs testaceous, the two hinder pairs with the femora and the outer half of the tibiæ pitchy-black, for the rest testaceous. Head densely and rugulosely punctured; the vertex with a sharply raised compressed tubercle in the middle and some erect hairs; antennæ with the rami very long and moderately stout; prothorax densely, finely, and shallowly punctured, an interrupted median line, an irregular space on either side of it about the middle, and a much smaller one near the base, smooth; elytra shining, with scattered shallow fine punctures, the base more closely and coarsely punctate; abdomen above and beneath closely punctured, the first two dorsal segments smooth, except at the sides, the following dorsal segments with irregular smooth spaces in the middle or on either side of it; the four hinder tibiæ bowed inwards, widening outwardly, and compressed; the first joint of the hind tarsi elongate, as long as the others united, compressed, moderately stout; wings hyaline, with a smoky fascia towards the apex, the costa piceous.

Length $5\frac{1}{4}$ millim.

Hab. Mexico, Orizaba (*Sallé*); Guatemala, Dueñas (*Salvin* [1]), Panzos (*Conradt*).

The specimen described by Mr. Waterhouse [1] is evidently a female, and we have an example from Orizaba agreeing with it. A male from Panzos, from which the above description is taken, no doubt belongs to the same species, the head, as in the same sex of *R. tuberculatus*, having a prominent tubercle on the vertex. In the females of both species this tubercle is replaced by an obtuse elevation. The tubercle (or median carina) on the vertex in the male is compressed and not nearly so stout as in *R. tuberculatus*: viewed from behind it appears to be conical.

6. **Rhipidophorus hyalinus.** (Tab. XVI. fig. 24, ♂.)

♂. Comparatively narrow, parallel, black, finely pubescent; the elytra pitchy-brown, with a narrow yellowish median fascia; the abdomen entirely piceous; the antennæ fuscous-yellow; the legs pitchy-brown, the anterior and posterior pairs with the basal half of the tibiæ and the tarsi in part obscure testaceous. Head very broad, closely and finely punctured, the front flattened; the vertex with a small, compressed, acute tubercle in the middle, and numerous long erect hairs; antennæ with the rami very long, slender, and slightly curled; prothorax closely and finely punctured, with a smooth median line, the disc obliquely depressed on either side towards the base, the depression limited anteriorly by a short, oblique, smooth ridge; elytra shining, finely punctured at the base, the apical half smooth; abdomen closely and finely punctured, the first two dorsal segments smoother; legs rather slender, the tibiæ moderately compressed; the first joint of the hind tarsi comparatively slender, elongate, as long as the others united; wings, the costa excepted, entirely hyaline, the costa pitchy-brown.

Length $2\frac{3}{4}$ millim.

Hab. Mexico, Cordova (*Sallé*).

One male example. This is much smaller than any of the other species here described, and is readily separable from all of them by its hyaline wings. The vertex has a short compressed tubercle in the middle. The head is exceedingly broad. The rami of the antennæ are very slender. *R. hyalinus* agrees in some respects with Leconte's description (Proc. Acad. Phil. xvii. p. 97) of the North-American *R. stylopides* (Newm.), but it is evidently distinct from that species.

†† *Vertex not tuberculate in the middle, at least in the female.*

7. **Rhipidophorus simplex.** (Tab. XVI. fig. 25, ♀.)

♀. Black, finely pubescent; the elytra yellow, with the apex suffused with reddish-brown; the abdomen above and beneath reddish-yellow, the last dorsal segment in great part, the penultimate segment with a broad transverse median patch, and the other dorsal segments with a small median spot, piceous; the antennæ reddish-yellow, the rami infuscate towards the tip; the legs reddish-yellow, with the outer half of the four anterior tibiæ and the base of all the femora suffused with piceous. Head finely and thickly punctured, with a short angular elevation on either side just beneath the point of insertion of the antennæ, the front flat; the vertex not raised in the centre, excavate in the middle on its anterior side; antennæ very short, the rami almost equal in length; prothorax densely and very finely punctured, with a median line on its anterior half, an oblique space on either side of it about the middle, and a small spot behind this on either side near the base smooth, the posterior half of the disc flattened; elytra shining, finely and somewhat thickly punctured, the apical third much smoother; abdomen above and beneath finely and closely punctured, the last dorsal segment with scattered punctures only; tibiæ moderately compressed;

the first joint of the hind tarsi elongate, as long as the other joints united, moderately stout, the second and third joints very short; wings slightly smoky, the costa piceous.
Length $6\frac{1}{2}$ millim.

Hab. Mexico, Ventanas in Durango (*Forrer*).

One female specimen. In this species the vertex is without distinct tubercle or elevation in the middle, and is hollowed out on its anterior side; the thorax has the posterior half of the disc flattened, this flattened part being limited on either side anteriorly by an oblique, slightly raised, smooth space.

Fam. MELOIDÆ.

Two Monographs of the Mexican species of this family have been published by Dr. E. Dugès:—(1) La Naturaleza, i. pp. 100 *et seq.* (1870); (2) An. Mus. Michoacano, ii. p. 34 *et seq.* (1889).

Subfam. *MELOINÆ.*

The subfamily *Meloinæ* is represented within our limits by ten species, belonging to four genera. *Cysteodemus* is one of the most remarkable forms of Meloidæ, and, like *Henous* and *Megetra*, is peculiar to the American continent.

MELOE.

Meloe, Linnæus, Syst. Nat. 10th edit. p. 419 (1758) & 12th edit. i. 2, p. 679.
Proscarabæus, Stephens, Ill. Brit. Ent., Mand. v. p. 65 (1832).
Cnestocera, Thomson, Skand. Col. vi. p. 342 (1864).
Treiodous, Dugès, La Naturaleza, i. p. 102 (1870); Bull. Soc. Zool. Fr. 1886, p. 580; An. Mus. Michoacano, ii. p. 35 (1889).

Four species of this genus occur within our limits; one only appears to have been known to Dugès from Mexico, whence three are now recorded. America north of Mexico contains fourteen representatives, the species becoming more numerous northwards. *Meloe* is a characteristic genus of the temperate zone, and in Mexico and Central America its members are confined to the elevated regions of the interior. It apparently does not extend south of Costa Rica, as we have not a single representative of the genus from the State of Panama; the South-American forms probably all belong to *Pseudomeloe*, Fairm. & Germain. *M. lævis*, Leach (=*cordillerœ*, Chevr., and *barranci*, Dugès), has the mandibles tridentate within, and it forms the type of the genus *Treiodous*, Dugès. This character is probably common to many other species with simple antennæ, *e. g.* of Mulsant's subgenus *Meloe*; *M. cicatricosus*, Leach, agrees with *M. lævis* in this respect. As is well known, some of the species of *Meloe*, more particularly those of the *M. proscarabæus*-group, vary to such an extent that it is

almost impossible to separate them in a satisfactory manner. The œdeagus of the male scarcely differs in form in *M. lævis* and *M. dugesi*: the central sheath is furnished on the lower side with two long, curved, sharp, compressed teeth directed backwards; on the upper side in *M. lævis* there is a very short curved tooth (also directed backwards) near the tip, this short tooth being obsolete in *M. dugesi*. The Mexican and Central-American species all have the head and thorax smooth, or, at most, very finely and sparsely punctured.

* *The fifth to the seventh joints of the antennæ dilated and distorted in the male, stouter than the following joints in the female.* (Proscarabæus, Steph.; Cnestocera, Thoms.)

1. **Meloe tropicus.** (Tab. XVII. fig. 1, ♂.)

Meloe tropicus, Motsch. Études Ent. v. p. 32 (1856)[1].
Meloe sculpticornis, Motsch. Bull. Mosc. xlv. 2, p. 48 (1873)[2].

Hab. Guatemala, Tepan (*Conradt*), Sabo in Vera Paz (*Champion*); Nicaragua[2] (*Wagner*[1]); Costa Rica (*Sallé*).

Motschulsky, in the fifth volume of his "Études," enumerates certain Coleoptera found by Wagner in Nicaragua; and amongst them he mentions a *Meloe* "voisine par la taille, la couleur, et la forme des antennes de *M. proscarabæus*, mais presque lisse, je la nomme *M. tropicus*"[1]. Long afterwards, he gives some further particulars about a male of the same species and names it *M. sculpticornis*. He describes[2] "the head, thorax, and abdomen as almost smooth; the elytra very finely rugulose and a little longer than the head and thorax united; the thorax elongate, distinctly angular at the sides anteriorly, and with an impressed median line; the colour as deep as in *M. proscarabæus*, but with a greenish reflection; the intermediate joints of the antennæ very strongly dilated." A male *Meloe* of very large size, from Costa Rica, labelled *M. tropicus*, Motsch., in Sallé's collection, agrees very well with this description; and I also refer two females from Guatemala to the same species. It closely resembles the N.-American *M. americanus*, Leach (the type of which is contained in the British Museum), and *M. angusticollis*, Say, but differs from both these species by the much smoother head, thorax, and elytra. The thorax is considerably longer than broad, with the sides somewhat angularly dilated anteriorly and sinuate or compressed behind this; it has a smooth, more or less impressed median line and a faint depression on either side of it on the disc about the middle; the surface bears a few very widely scattered exceedingly minute punctures, these being chiefly placed near the anterior margin. The names *M. tropicus* and *M. sculpticornis*, Motsch., are omitted by Escherich (Deutsche ent. Zeit. 1889, pp. 333–335) in his list of species of *Meloe* added since the publication of the Munich Catalogue.

2. **Meloe dugesi.** (Tab. XVII. figg. 2, ♂; 2 *a*, lateral view of the œdeagus.)

Black, sometimes with a faint violaceous lustre, opaque or subopaque; the legs blackish-violaceous, the antennæ in part violaceous. Head and prothorax smooth or with widely scattered very fine punctures; the prothorax a little longer than broad, in some specimens as broad as long, gradually narrowing from a little before the middle to the base, the base emarginate in the centre, the disc usually with a faintly impressed smooth median line; elytra almost smooth or with faint longitudinal wrinkles; antennæ elongate—joints 5–7 distorted and dilated in the male, stouter than the following joints in the female; abdomen—above almost smooth or faintly rugulose, beneath thickly and finely, in some specimens more sparsely, punctured; sixth ventral segment triangularly emarginate in the male; legs densely and finely punctured. Length 12–36 millim. (♂ ♀.)

Hab. Mexico (*Mus. Brit.*), Pinos Altos in Chihuahua (*Buchan-Hepburn*), Durango city, Villa Lerdo in Durango, Jalapa (*Höge*), Amula in Guerrero (*H. H. Smith*), Toluca, Cordova (*Sallé*); Guatemala, Tepan (*Conradt*).

Thirty-four specimens, the majority of which are from Villa Lerdo and Jalapa. Closely allied to *M. tropicus*, and perhaps only a variety of that species. Some examples are black, smooth, and quite opaque. Others, equally dull black, have the thorax very finely and distinctly punctured: such specimens closely resemble the North-American *M. strigulosus*, Mann.; they have the thorax, however, always more narrowed behind than in that species (of which I have three Californian examples before me for comparison). *M. dugesi* differs from *M. tropicus* by its black or violaceous-black colour, opaque surface, and less elongate thorax, the sides of the latter less angularly dilated anteriorly and less sinuate behind. The female is exceedingly like *M. lævis*, but may be easily known from it by the form of the antennæ. The thorax varies in width; in three males from Jalapa it is very narrow, and in one male from Cordova it is, on the contrary, very broad.

This species appears to have been quite overlooked by Dugès, after whom I have much pleasure in naming it. In the British Museum there is a single female example of a *Meloe*, labelled "Mexico (*Glennie*)," which is apparently an extreme form of *M. dugesi*; from which it differs by its stouter antennæ (their penultimate joints not much longer than broad), and very broad head and thorax.

** *Antennæ simple.* (Meloe, Muls.; Treiodous, Dugès.)

a. *Antennæ thickened towards the tip, more distinctly so in the female; elongate in the male, much shorter in the female.*

3. **Meloe lævis.** (Tab. XVII. fig. 3, lateral view of the œdeagus.)

Meloe lævis, Leach, Trans. Linn. Soc. xi. p. 249, t. 18. fig. 4[1]; Brandt & Erichs. Monogr. gen. Meloës, p. 135[2].

Meloe cordilleræ, Chevr. in Guérin's Icon. Règne Anim. iii., Ins. p. 133, t. 35. fig. 6[3].

Treiodous cordilleræ, Dugès, An. Mus. Michoacano, ii. p. 35 (1889)[4].

Meloe sublævis, Lec. Proc. Acad. Phil. vii. p. 84[5]; Col. of Kansas and Eastern New Mexico, p. 56[6]; Journ. Acad. Phil. (2) iv. p. 38[7].

Meloe tucci, Peñafiel y Barranco, Gaceta Méd. de Mexico, ii. no. 11, cum fig.[8]
Meloe tridentatus, Jiménez, loc. cit. no. 15, p. 225 (1866)[9].
Treiodous barranci, Dugès, La Naturaleza, i. p. 102, t. 1 *a*. figg. 1, 2 (1870)[10].
Meloe opaca, Motsch. Bull. Mosc. xlv. 2, p. 48 (♀)[11].
Meloe montanus, Chevr. Dej. Cat. 3rd edit. p. 242 (nec Lec.)[12].

Hab. North America, Colorado, New Mexico[5 6 7], Arizona[7].—Mexico[12] (*Mus. Berol.*[2]; *Mus. Brit.*), North Mexico[7], Sonora (*coll. F. Bates*), Saltillo and Monclova in Coahuila, San Luis Potosi, Mexico city (*Dr. Palmer*), Durango city (*Höge*), Amula, Omilteme, and Xautipa in Guerrero (*H. H. Smith*), Atotonilco el Grande (*Peñafiel*[10]), Cuernavaca, Peras, Puebla, Parada, Santecomapan, Capulalpam, Orizaba[3] (*Sallé*), Toluca[4], Oaxaca, Jalapa (*Sallé*, *Höge*), Silao in Guanajuato[10], Guanajuato[4], Morelia[4], Vera Cruz[4] (*Dugès*); Guatemala (*Sallé*), Escuintla, San Gerónimo, San Joaquin (*Champion*), Tepan, Coban (*Conradt*), Aceytuno (*Salvin*); Nicaragua[11]; Costa Rica (*Sallé*, *Van Patten*).—San Domingo[1 2] (*Mus. Brit.*).

This is a common and very widely distributed species in the elevated regions of Central America, extending northwards into the United States and southwards to Costa Rica. *M. lævis* may be chiefly known by its almost impunctate, dull surface, and rather elongate thorax; the elytra in some examples are longitudinally wrinkled; the antennæ are simple in both sexes, distinctly thickened towards the tip, and more elongate in the male than in the female. A few specimens of the male sex from Capulalpam, Peras, and Toluca have the antennæ more slender than usual, but I am unable to separate them from *M. lævis*. *M. cordillerœ*, Chevr., does not differ in any way from *M. lævis*, Leach, the type of which is contained in the British Museum. *M. sublævis*, Lec., of which I have a male specimen from Colorado before me, merely has the elytra more distinctly rugulose than in typical *M. lævis*; several of our Mexican examples exhibit this peculiarity. I have examined upwards of one hundred examples, and there can be no doubt that all the above names refer to one and the same species.

b. *Antennæ long and comparatively slender in both sexes, very little longer in the male, not thickened towards the tip.*

4. **Meloe gracilicornis.** (Tab. XVII. fig. 4, ♀.)

Entirely black, opaque, smooth (the elytra included), impunctate. Antennæ elongate and comparatively slender in both sexes, a little longer in the male than in the female, straight, not thickening outwardly in either sex, joints 3–7 about equal in length, 8–10 slightly longer, 11 nearly twice as long as 10, of equal thickness to beyond the middle and then rapidly narrowing to the apex, its apex somewhat pointed; prothorax about as long as broad, narrowing behind, the base rather deeply emarginate in the middle, the disc with a smooth central line; abdomen above and beneath smooth, impunctate; sixth ventral segment triangularly emarginate in the male.

Length 16½–36 millim. (♂ ♀.)

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*), Juquila (*Sallé*).

Three examples—a pair from Omilteme and a male from Juquila. *M. gracilicornis* is very closely allied to *M. lævis*, but may easily be distinguished from it by the slender antennæ in both sexes, this difference being especially noticeable in the female sex: in the female of *M. lævis* these organs are much shorter than in the male, and distinctly thickened towards the apex. In Sallé's collection there are four male specimens labelled with the MS. name *M. gracilicornis*, Sallé: one of these, from Juquila, I refer to this species, the other three (though they have the antennæ unusually slender), from Capulalpam and Peras, I treat as an extreme form of *M. lævis*.

HENOUS.

Henous, Haldeman, in Stansbury's Exped. to Great Salt Lake, p. 377 (1852); Leconte, Proc. Ac. Phil. vi. p. 330; Lacordaire, Gen. Col. v. p. 661; Dugès, Bull. Soc. Zool. Fr. 1886, p. 580.
Nomaspis, Leconte, New Species Col. p. 156 (1866).

In this genus the elytra are not at all imbricate at the suture, the third antennal joint is elongate, and the two portions of each tarsal claw are subequal in length.

1. Henous confertus.

Meloe conferta, Say, Journ. Acad. Phil. iii. p. 281 (1824)[1]; Complete Writings, ii. p. 167.
Henous confertus, Lec. Proc. Acad. Phil. vi. p. 330[2]; Journ. Acad. Phil. (2) iv. p. 38[3] (nec Dugès).
Henous techanus, Hald. in Stansbury's Exped. to Great Salt Lake, p. 377, t. 9. figg. 12–14[4].

Hab. North America, Missouri[1 2], Arkansas[1], Kansas[3], Texas[2 3 4].—Mexico, San Pedro in Coahuila (*Dr. Palmer*).

One male specimen from Coahuila, agreeing perfectly with others of the same sex from Texas. The pubescence is uniformly black in this species.

2. Henous cardui. (Tab. XVII. fig. 5, ♀.)

Henous conferta, Dugès, La Naturaleza, i. p. 102, t. 1*a*. fig. 3 (nec Say)[1].
Henous cardui, Dugès, An. Mus. Michoacano, ii. p. 36 (1889) (♀)[2].

Hab. Mexico (*Sallé, ex coll. Sturm*), Oaxaca (*Höge*), Mazamitla[1 2], Uruapan[2], Toluca[2] (*Dugès*).

We have received five females and two males of this species. The female only was known to Dugès. *H. cardui* is closely allied to *H. confertus*, but differs from it by the finer and shallower punctuation of the head and thorax, the interspaces between the punctures not being granular; the elytra are also less rugosely punctured; the thorax is less convex; the head has a more or less distinct, smooth, impressed median line extending from the epistoma to the occiput; the third joint of the antennæ is not so long as the following two joints united; and the pubescence is brown, with a few intermixed ashy hairs. The male has the elytra contiguous for about two-thirds of their length, and subconnate towards the base; in the same sex of *H. confertus* they

are contiguous nearly to the apex, and in some specimens connate throughout. In this, as in the other species of the genus, the anterior femora and tibiæ have a silky-pubescent patch on the inner side about the middle, this character being also present in some genera of the group Cantharides, e. g. *Macrobasis*, *Epicauta*, &c. The males of *H. cardui* have the side-pieces of the meso- and metasternum covered by the inflexed portion of the elytra, these pieces being more or less exposed in the female.

3. **Henous mexicanus.** (Tab. XVII. fig. 6, ♂.)

Henous mexicanus, Dugès, An. Mus. Michoacano, ii. p. 37[1].

Hab. Mexico, Tulancingo (*Flohr*[1]), Misantla (*Höge*).

Two specimens of this insect were captured by Höge at Misantla. It differs from *H. confertus* and *H. cardui* by its smoother and almost glabrous upper surface. The elytra are very minutely and sparsely, the head and prothorax more closely and distinctly, punctured. Fresh specimens appear to be clothed with a very fine scattered pubescence, which is easily abraded. *H. mexicanus* is nearly allied to *H. sublævis* (Horn), from California.

CYSTEODEMUS.

Cysteodemus, Leconte, Ann. Lyc. N. York, v. p. 158 (1851); Lacordaire, Gen. Col. v. p. 661.

This remarkable genus contains two species, one of which inhabits New Mexico, Arizona, and Northern Mexico, and the other the Colorado desert. The greatly inflated, connate elytra, which completely cover the abdomen, distinguishes it from *Megetra*.

1. **Cysteodemus wizlizeni.** (Tab. XVII. fig. 10.)

Cysteodemus wizlizeni, Lec. Ann. Lyc. N. York, v. p. 158, nota[1]; Proc. Ac. Phil. vi. p. 330[2]; Col. of Kansas & Eastern New Mexico, p. 16, t. 2. figg. 10, 10*a*[3]; Arcana Naturæ, p. 126[4]; Journ. Acad. Phil. (2) iv. p. 38[5]; Dugès, An. Mus. Michoacano, ii. p. 40[6].

Hab. North America, New Mexico[1 2 4], Arizona[4 5], between Santa Fé and Chihuahua[3].—Mexico, Chihuahua (*Höge*[6]), Villa Lerdo in Durango (*Höge*).

Found in numbers by Herr Höge in Northern Mexico during his second expedition.

MEGETRA.

Megetra, Leconte, in Thomson's Arcana Naturæ, p. 127 (1859); Leconte & Horn, Class. Coll. N. Am. 2nd edit. p. 416 (1883); Dugès, Bull. Soc. Zool. Fr. 1886, p. 580.

This genus includes two species from the Southern United States and Northern Mexico. According to von Harold (Col. Hefte, xiii. p. 105), the genus *Pseudomeloe*, Fairm. & Germain, which contains numerous species from the South-American Andes, is synonymous with *Megetra*; but this is probably incorrect, as *Pseudomeloe* is particularly stated to have the two portions of each tarsal claw equal. In *Megetra* the anterior tibiæ are densely clothed on the inner side with fine silky pubescence.

1. **Megetra cancellata.** (Tab. XVII. fig. 8, var.)

Meloe cancellatus, Brandt & Erichson, Monogr. gen. Meloës, p. 141, t. 8. figg. 9, 9 *b* [1].
Megetra cancellata hœgei, Dugès, An. Mus. Michoacano, ii. p. 39 [2].

Hab. Mexico (*Mus. Berol.*[1]; *Sallé*; *ex coll. Sturm*), Tula [2] and Pachuca in Hidalgo (*Höge*).

Var. The elytra comparatively longer in both sexes, in some males almost covering the abdomen; the reticulated reddish lines more or less obliterated towards the suture, and forming an irregular sublateral vitta with diverging branches on either side. (Fig. 8.)

Cysteodemus cancellatus, Lec. Proc. Acad. Phil. vii. p. 224 [3]; Journ. Acad. Phil. (2) iv. p. 38 [4].
Megetra cancellata, Lec. Ann. & Mag. Nat. Hist. (4) vi. p. 404 [5]; Dugès, An. Mus. Michoacano, ii. p. 38 [6].

Hab. North America, New Mexico [5], Arizona [4 5], Los Organos [3], San Diego [3].—Mexico [4], Villa Lerdo in Durango (*Flohr* [6], *Höge*).

Herr Höge obtained a large number of examples of both forms of this species; the two forms occurring in widely-separated localities and not intermixing. Leconte states [5] that his *M. cancellata* is probably a variety of *M. vittata*.

2. **Megetra vittata.**

Cysteodemus vittatus, Lec. Proc. Acad. Phil. vi. p. 330 [1]; Col. of Kansas and Eastern New Mexico, p. 16, t. 2. fig. 9 [2]; Journ. Acad. Phil. (2) iv. p. 38 [3].

Hab. North America, New Mexico [1 2], Arizona [3].—Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*), Chihuahua city, Villa Lerdo in Durango (*Höge*).

Very near *M. cancellata*, var., but differing from it by its much smaller size, the more shining and less transverse thorax, and the shorter and deeply foveate elytra; the reddish or yellow sublateral vitta on each elytron well defined, with (at most) very short divergent branches on either side. The sculpture of the elytra is very different from that of either of the forms of *M. cancellata*, Brandt & Er.

Subfam. *CANTHARINÆ.*

Group **HORNIIDES.**

This group contains two very anomalous insects, one (*Hornia minutipennis*, Riley) from the United States, and the other (*Leonia rileyi*, Dugès) from Mexico; both appear to be parasitic on the Hymenopterous genus *Anthophora*. *Leonia* seems chiefly to differ from *Hornia* by the tarsal claws being provided on the underside with "a long, straight, acute spine, which attains three-fourths of the length of the claw;" we have not received an example of it. *Hornia* is referred by Leconte and Horn (Class. Col. N. Am. 2nd edit. p. 419) to the Sitarides.

LEONIA.

Leonia, Dugès, Insect Life, i. no. 7, pp. 211–213, figg. 47, *b–f* (January 1889); An. Mus. Michoacano, ii. pp. 1–5, 112 *bis,* tab. (1889).

1. Leonia rileyi.

Leonia rileyi, Dugès, loc. cit.[1]

Hab. Mexico, Tupataro, State of Guanajuato (*Dugès*[1]).

Two examples, found on the walls of a dwelling-house, near the nests of an undescribed *Anthophora*[1]. One of these specimens I have seen in Paris, in the collection of M. Sallé.

Group HORIIDES.

HORIA.

Horia, Fabricius, Mant. Ins. i. p. 164 (1787); Lacordaire, Gen. Col. v. p. 663.

This genus is represented in the warmer regions of both hemispheres. *H. maculata,* Swed., is a common insect in Tropical South America, and extends northwards to Mexico; according to Lansdown Guilding, it preys upon *Xylocopa.*

1. Horia maculata.

Cucujus maculatus, Swed. Vetensk. Ac. nya Handl. 1787, p. 199, t. 8. fig. 8[1].

Horia maculata, Oliv. Ent. iii. no. 53 *bis,* p. 4, t. 1. figg. 1, *a, b*[2]; Fabr. Ent. Syst. i. 2, p. 90[3]; Guild. Trans. Linn. Soc. xiv. p. 316, t. 8. fig. 6[4], and xv. pp. 511, 512 (part.)[5]; Cast. Hist. Nat. Ins. Col. ii. p. 279[6].

Cantharis maculatus, Voet, Cat. Syst. Col. ii. p. 76, t. 49. fig. 9 *β* (1806)[7].

? *Horia apicalis,* Perty, Del. anim. artic. Bras. p. 66, t. 13. fig. 14[8].

Hab. Mexico, Morelia (*Sallé*); Nicaragua, Chontales (*Belt*); Panama, Bugaba (*Champion*).—South America[4 5], Colombia, Venezuela, Ecuador, Cayenne[3 6], Brazil[6 8], Amazons, Peru, Trinidad; Antilles[6], San Domingo[2].

Two species are confounded by authors under the name of *H. maculata* (Swed.); their differences, however, have already been noticed by Lansdown Guilding[5]. Of the true *H. maculata* we have only received three examples from within our limits—a male from Morelia, a female from Chontales, and a male from Bugaba. The *H. maculata* of Dugès, and of Leconte and Horn, is no doubt referable to the species described below under the name of *H. auriculata. H. apicalis,* Perty, from Brazil, is apparently nothing but a variety of *H. maculata* (Swed.), from which it differs in having the base and apex only of the elytra black. A variety with the elytra entirely black occurs in Colombia. The head in *H. maculata* is flattened in front, or has a broad shallow median depression; the antennæ are comparatively short in both sexes; the thorax is very broad, in some male specimens wider in front than at the base, strongly transverse,

with the obtuse anterior angles raised, not deflexed; the first joint of the hind tarsi is shorter than the following joints united. The spots on the elytra are usually smaller than in *H. auriculata*: in the latter the antemedian juxta-sutural spot is extended to the suture, so as to form with the one on the opposite elytron a common, transverse, large black patch.

2. **Horia auriculata.** (Tab. XVII. figg. 9, ♂; 9 *a*, labium; 9 *b*, maxilla and maxillary palpus; 9 *c*, œdeagus; 9 *d*, œdeagus in profile.)

? *Horia maculata*, Dugès, La Naturaleza, i. p. 103, t. 1 *a*. fig. 4[1]; Leconte & Horn, Class. Col. N.-Am. 2nd edit. p. 417 (1883)[2] (nec Swed.).

Reddish-testaceous, shining; the mandibles, eyes, palpi, antennæ, and legs, the base of the femora excepted, black; the elytra with the base and apex and two interrupted fasciæ (formed by four large spots on each elytron) black. The head almost smooth—in the male exceedingly large, with the temples greatly swollen on either side, so as to leave a very deep median groove, the convex portion forming a more or less prominent ear-like lateral projection, which is deeply excavate behind for the reception of the anterior angle of the prothorax—in the female much smaller, with the temples only moderately swollen on either side, and the median groove shallow; the antennæ in both sexes much more elongate than in *H. maculata*, with the fourth joint longer than the second and third joints united; the prothorax in the male much narrower than in *H. maculata*, not so wide anteriorly, less transverse, with the anterior angles deflexed and considerably produced in front, the transverse basal depression shallower, the deep transverse depression on either side near the anterior margin almost or quite obsolete, the surface smooth or minutely and sparsely punctured,—in the female not nearly so wide as in the same sex of *H. maculata*, and very much narrower at the apex than at the base; the first joint of the hind tarsi much more elongate than in *H. maculata*, as long as the following joints united; the sixth ventral segment cleft in the middle in the male.

Length 19–37 millim. (♂ ♀.)

Hab. North America, South-western Arizona[2].—Mexico[2], Mazatlan, San Blas (*Forrer*), Acapulco (*H. H. Smith*), Colima (*Dugès*[1]), Guadalajara, Almolonga (*Höge*), Tasco, Oaxaca (*coll. F. Bates*); Guatemala, Cerro Zunil, San Isidro, San Gerónimo (*Champion*); Costa Rica (*Sallé, Van Patten*).—Antilles, Barbados.

Specimens of this species were chiefly obtained by me in the open verandahs of houses; and on more than one occasion I have observed the insect crawling on the wood-work in the close vicinity of the nests of a large blue wasp, these nests being commonly found in such places. It is probable, therefore, that *H. auriculata* really preys upon this wasp, and not upon *Xylocopa*.

The insect from Barbados mentioned by Landsdown Guilding is evidently referable to *H. auriculata*. I have not seen an example of *H. auriculata* from south of Costa Rica.

Group **NEMOGNATHIDES.**

NEMOGNATHA.

Nemognatha, Illiger, Magazin, vi. p. 333 (1807); Lacordaire, Gen. Col. v. p. 691; Leconte, Trans. Am. Ent. Soc. viii. p. 212[1].

Leptopalpus, Guérin, Icon. Règne Anim., Ins. p. 136.

This genus contains numerous representatives in the New World, the majority of which are from the United States, Mexico, or Guatemala, the species becoming fewer in number southwards. Some of its members vary greatly in colour, more particularly as regards the elytra—from flavous or fulvous to entirely black (*N. lurida*, *N. nigripes*, &c.), or with a black vitta (*N. piezata*, *N. tarasca*, &c.); others, *N. cœruleipennis*, Perty (=*versicolor*, Chevr.), are equally variable as regards the colour of the head, thorax, and underside. Leconte, in his second Monograph of the North-American *Nemognathæ*[1], sinks seven out of the twenty-five described species as varieties. The elongated outer lobe of the maxillæ is the only character by which this genus can be separated from *Zonitis*, and this character fails in one of the new species here described, *N. ephippiata*. In a series of eight examples of this insect, six have the lobe a little longer than the head, one has it very much abbreviated, and in another it is not longer than in typical *Zonitis* *. In *N. cœruleipennis*, Perty, it is fully as long as the body.

The Central-American species may be tabulated thus:—

Head short, very broad, wider than the thorax (still wider in the male); elytra violaceous or blue, metallic; upper surface pubescent; outer lobe of the maxillæ as long as the body . . . . . Species 1.

Head short or comparatively short, smaller, not wider than the thorax; elytra not metallic; outer lobe of the maxillæ as long as or shorter than the body.

Elytra variable in colour—yellow, fulvous, or black, in some species vittate or with the base of the same colour as the thorax.

Thorax subquadrate, with the anterior angles rounded, as long or nearly as long as broad; the upper surface pubescent or villose . . . . . Species 2–4.

Thorax strongly transverse.

Upper surface finely pubescent . . . . . Species 5, 6.

Upper surface villose . . . . . Species 7.

Elytra ochraceous, with black fasciæ; the head and prothorax bivittate; upper surface finely, densely pubescent . . . . . Species 8.

Head more prolonged in front, the mandibles more elongate; the elytra variable in colour, not metallic; the outer lobe of the maxillæ shorter than the body, in some species not longer than the head.

Thorax rather convex, subquadrate with the anterior angles rounded, or subcampanulate.

Upper surface (the head excepted) glabrous.

Elytra costate . . . . . Species 9.

Elytra not costate . . . . . Species 10.

Upper surface pubescent . . . . . Species 11.

Thorax campanulate, depressed; the upper surface pubescent.

Upper surface yellow . . . . . Species 12.

Upper surface black . . . . . Species 13.

* Casey, Ann. New York Acad. vi. p. 170 (Nov. 1891), sinks *Nemognatha* and *Gnathium* under *Zonitis*.

1. Nemognatha cœruleipennis. (Tab. XVII. fig. 7, var. γ.)

Nemognatha cœruleipennis, Perty, Del. anim. artic. Brasil. p. 67, t. 13. fig. 15 (1830)[1]; Casteln. Hist. Nat. Ins. Col. ii. p. 280[2].

Nemognatha versicolor, Chevr. Col. Mex., Cent. i. fasc. 4, no. 60 (1834)[3]; Dugès, La Naturaleza, i. p. 167, t. 2. fig. 12[4]; An. Mus. Michoacano, ii. p. 110 *bis*[5].

Var. α. The abdomen reddish-testaceous.

Var. β. The under surface, the femora entirely or in part, and the extreme base of the tibiæ also in some specimens, reddish-testaceous.

Var. γ. The head, prothorax, under surface, and legs piceous or black. (Fig. 7.)

Nemognatha bicolor, Luc. in Casteln. Exped. dans l'Amér. du Sud, Entom. p. 148[6] (nec Lec., nec Walk.).

Nemognatha lucasi, Gemm. & Harold, Col. Hefte, vi. p. 124.

Var. δ. As in γ, but with the abdomen, and sometimes the trochanters also, reddish-testaceous.

Nemognatha abdominalis, Luc. loc. cit.[7]

Hab. Mexico, Tierra Colorada and Venta de Zopilote, both in Guerrero (*H. H. Smith*), Matamoros Izucar (*Sallé*), environs of the city of Mexico[3] (*Höge*), Michoacan[5], Sierra de Mazamitla[4] (*Dugès*); Guatemala, San Gerónimo, El Jicaro (*Champion*).—South America, Cayenne[2], Upper Amazons, Peru, Brazil[1].

The different forms of this species occur together, upon flowers on the open savanas, in various places in Mexico, in Guatemala, and in South America. The head, thorax, under surface, and legs vary in colour from black to reddish-testaceous; the elytra are violaceous or cæruleous, metallic. The varieties with the head and thorax black (γ and δ) occur commonly at Matamoros Izucar; but they are not mentioned by Chevrolat or Dugès. Numerous South-American examples of the forms described by Lucas under the names of *N. bicolor* and *N. abdominalis* are before me; they do not differ in any way from those from Central America. In the male of *N. cœruleipennis* the fifth ventral segment is unimpressed, and the sixth is cleft down the middle and broadly excavate in the centre. The head in the male is broader and has the vertex more tumid than in the female.

2. Nemognatha lurida.

Nemognatha lurida, Lec. Proc. Acad. Phil. vi. p. 345[1]; Trans. Am. Ent. Soc. viii. p. 212[2].

Nemognatha decipiens, Lec. Proc. Acad. Phil. vi. p. 347[3].

Nemognatha rufa, Dugès, An. Mus. Michoacano, ii. p. 111 *bis*[4].

Hab. North America, Missouri[1], Kansas[2], Colorado[2], Oregon[2 3], Texas[1 2], Arizona[2]. —Mexico, Northern Sonora (*Morrison*), Monclova in Coahuila (*Dr. Palmer*), Villa Lerdo in Durango (*Höge*[4]).

From each of the Mexican localities quoted we have received numerous examples, and these agree perfectly with others from Texas. The colour is variable, the elytra being often entirely black, piceous, or brown. All the specimens from Sonora have

the under surface, legs, scutellum, and elytra black. *N. decipiens* is stated by its author [2] to be a variety of *N. lurida*; if this is the case, Leconte's description [3] of the posterior tibial spurs of *N. decipiens* is inaccurate. In *N. lurida* the outer spur of the posterior tibiæ is exceedingly stout, broad, and truncate at the apex, and the inner one is short and small. Amongst the large number of specimens collected by Höge at Villa Lerdo, there are several with the elytra entirely piceous. The general colour is fulvous.

3. Nemognatha lutea.

Nemognatha lutea, Lec. Proc. Acad. Phil. vi. p. 346 [1]; Trans. Am. Ent. Soc. viii. p. 213 [2].
Nemognatha pallens, Lec. loc. cit. p. 346 [3].

Hab. North America, Missouri [1], Kansas [2], Montana [2], Colorado [2], California [2 3], Texas [2].—Mexico, Northern Sonora (*Morrison*).

A single specimen from Sonora apparently belongs to this species. It differs from *N. lurida* in the much sparser punctuation of the thorax, and in having the outer spur of the hind tibiæ narrower. The legs are entirely testaceous, and the thoracic pubescence is yellow.

4. Nemognatha piezata.

Zonitis piazata, Fabr. Ent. Syst., Suppl. p. 104 [1].
Zonitis piezata, Weber, Obs. Ent. p. 60 [2].
Nemognatha piezata, Lec. Proc. Acad. Phil. vi. p. 347 [3]; Trans. Am. Ent. Soc. viii. p. 213 [4].
Zonitis vittata, Fabr. Syst. Eleuth. ii. p. 24 [5]; Coqueb. Illustr. Icon. Ins. iii. p. 128, t. 29. fig. 5 [6].
Nemognatha texana, Lec. Proc. Acad. Phil. vi. p. 347 [7].

Hab. North America, Carolina [1 5 6], Georgia [3], Atlantic region to California and Montana [4], Texas [7].—Mexico (*Sallé*), Jalapa (*Sallé*), Atoyac in Vera Cruz (*H. H. Smith*).

I refer three examples from Mexico to this species. One, a male, from Jalapa, is of a ferruginous colour, with a broad black median vitta on each elytron, the under surface and femora reddish-testaceous, and the tibiæ and tarsi in great part piceous. The two others, females, are of a uniform reddish-luteous or luteous colour above, with the under surface, tibiæ, and tarsi more or less infuscate. The vittate form agrees well with typical *N. piezata* from Texas; the unicolorous ones with Leconte's var. *texana*, of which I also have Texan examples before me.

In the male of this species the fourth and fifth ventral segments are deeply excavate along the middle, the concave portion being densely clothed with fine pubescence; the sixth segment, as usual, is cleft down the middle, and broadly and deeply excavate in the centre. The spurs of the hind tibiæ are moderately stout and obtuse, the outer one a little stouter than the other. According to Leconte, *N. bicolor*, *N. discolor*, and *N. palliata*, Lec., are probably nothing more than varieties of *N. piezata*. The only

specimen I have seen of *N. bicolor*, a male, has the elytra more rugosely punctured than in *N. piezata*.

5. **Nemognatha brevicollis.** (Tab. XVII. fig. 11.)

Elongate, parallel, depressed; above and beneath, the legs, palpi, and antennæ black, the prothorax and the extreme base of the elytra (including the humeri), and in one specimen a transverse patch between the eyes, flavo- or reddish-testaceous; clothed with very fine pubescence, that on the prothorax semierect and partaking of the ground-colour. Head triangular, not much prolonged in front, thickly and not very finely punctured; the mandibles and palpi comparatively short; the outer lobe of the maxillæ a little shorter than the antennæ, not half the length of the body; the antennæ comparatively short, rather stout, filiform, the second joint extremely short, not nearly half the length of the third; prothorax a little wider than the head, nearly twice as broad as long, narrowed behind, the hind angles almost rounded, the surface finely and somewhat thickly punctured; elytra long and parallel, densely rugulose, with traces of three faint raised lines extending from the base to about one-fourth from the apex; beneath shining, sparsely punctured; the spurs of the hind tibiæ slender, subequal.

Length $8\frac{1}{2}$–$10\frac{1}{2}$ millim. (♀.)

Hab. Mexico, Matamoros Izucar (*Sallé*, *Höge*).

Two examples. Closely allied to the North-American *N. nemorensis*, Hentz; but differing from it by the pale thoracic pubescence, the thorax itself wider and still more transverse; the elytra black, with the extreme base coloured like the thorax, densely rugulose (not densely and minutely punctured). The second joint of the antennæ is extremely short. The elytra in certain lights have a violaceous lustre. The specimens I have seen of *N. nemorensis* have the head broader than the thorax.

6. **Nemognatha foveifrons.** (Tab. XVII. fig. 12.)

Moderately elongate, rather broad, somewhat depressed, flavo-luteous, the eyes, the antennæ, and the tips of the mandibles and palpi black; very finely pubescent, the pubescence very short and partaking of the ground-colour, the head and prothorax shining, the elytra opaque; the legs testaceous, with the knees and the tarsi piceous. Head short, triangular, deeply transversely depressed between the eyes, thickly and finely punctured, the mandibles comparatively short, the labrum transverse, the palpi moderately long; the outer lobe of the maxillæ nearly half the length of the body; antennæ elongate, filiform, the second joint about half the length of the third; prothorax wider than the head, strongly transverse, a little constricted at the sides behind, and dilated at the base, the anterior angles broadly rounded, the hind angles prominent, the surface sparsely and finely punctured, the disc shallowly transversely depressed before the apex, an oblique depression on either side externally at the base; scutellum sparsely punctured; elytra moderately long, parallel, flattened on the disc, minutely but not very densely granulate, each elytron with four, faint, slightly impressed lines extending from the base nearly to the apex; beneath testaceous, sparsely and finely punctured; the spurs of the hind tibiæ slender, equal.

Length $9\frac{1}{2}$ millim. (♀.)

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*).

One example. This species does not appear to be very closely allied to any of those described by Leconte. The thorax is strongly transverse, depressed before the apex and at the base on either side externally, the punctuation moderately fine and scattered. The sculpture of the elytra consists of not very closely placed, minute, feebly raised,

granular points, the surface being opaque. The elytra are yellower in colour than the head and thorax.

7. **Nemognatha nigripes.**

Moderately elongate, subparallel, shining, above and beneath pitchy-black, the head (the eyes excepted), prothorax, and the apex of the abdomen flavo-testaceous; thickly clothed with long, erect, blackish hairs. Head short, triangular, thickly and not very finely punctured, the mandibles comparatively short, the labrum transverse; the outer lobe of the maxillæ about half the length of the body; antennæ elongate, filiform, the second joint half the length of the third; prothorax slightly wider than the head, strongly transverse, the sides rounded in front and straight and a little converging behind, sparsely and moderately finely punctured; elytra finely and rather densely punctured; beneath sparsely punctured, the ventral segments almost impunctate; the spurs of the posterior tibiæ slender, subequal.

Var. The elytra flavous or flavo-luteous.

Length 8–9 millim.

Hab. Mexico (*coll. F. Bates*), Yolos (*Sallé*); Guatemala (*Mus. Brit.*).

Four examples, one of the type and three of the variety, all in a bad state of preservation, and their sex not ascertained. In its long, erect, dark pubescence, strongly transverse thorax, and dark underside and legs this species approaches the North-American *N. scutellaris*, Lec.; it differs, however, from the two Californian examples of that insect before me by its more finely punctured upper surface, the punctures on the elytra much more closely placed, the smoother abdomen, &c. *N. nigripennis*, Lec., from New Mexico and California, is an allied species, but apparently has a less strongly transverse thorax.

Both forms of *N. nigripes* were obtained at Yolos. The specimen in Mr. F. Bates's collection, from that of Dejean, is labelled with the name I have adopted.

8. **Nemognatha ephippiata.** (Tab. XVII. fig. 13.)

Moderately elongate, flattened above, a little widened posteriorly, opaque, finely and densely pubescent; the head testaceous, with two oblong spots between the eyes and an oblique mark on either side behind these extending to the occiput, black, these markings in some examples coalescent, largely extended, and forming two broad sinuous stripes; the prothorax testaceous or ochraceous, with a broad, slightly oblique, black vitta on either side of the disc extending from the apex nearly to the base; the scutellum varying in colour from ochraceous to piceous; the elytra ochraceous, with a fascia below the base, more or less excised on its lower edge, and extending upwards at the suture and laterally to the base (so as to enclose a large rounded spot on each elytron), and the apical third or more, black; the antennæ, palpi, tips of the mandibles, and legs black, the base of the femora sometimes testaceous; the under surface varying in colour from piceous to testaceous. Head transverse, densely, rugosely punctured, with a smooth, impressed, median line, the mandibles comparatively short, the labrum broader than long; the outer lobe of the maxillæ a little longer than the head, in some specimens abbreviated and not longer than in *Zonitis*; antennæ long and filiform, the second joint scarcely shorter than the third; prothorax of the same width as the head, broader than long, subcampanulate, the sides broadly rounded in front and slightly sinuate behind, the hind angles rather prominent, the surface densely, rugosely punctured, transversely depressed on either side anteriorly, and with a smooth, impressed, median line; elytra narrowed a little towards the base, separately rounded at the apex, very densely punctured, with the interspaces somewhat granular, and usually with indications of three faint smooth lines on the disc; beneath finely and rather closely punctured; the sixth ventral segment cleft and deeply

excavate, and the fifth slightly impressed in the centre at the apex, in the male; the posterior tibial spurs stout and obtuse, subequal.

Var. The black markings of the elytra interrupted at the suture, the apical patch not reaching the tip.

Length $6\frac{3}{4}$–11 millim. (♂ ♀.)

Hab. MEXICO, Rincon in Guerrero, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Chiacam in Vera Paz (*Champion*), between Tactic and Tucuru (*Conradt*); PANAMA, Bugaba (*Champion*).

Eight examples—seven of the type and one of the variety, the latter from Teapa. This peculiar species closely resembles *Zonitis nigromaculata*, Dugès, but it is less elongate, the head and thorax are shorter, and the antennæ are filiform; the ochraceous basal spot on each elytron is more oblong in the *Zonitis*, and placed at the shoulders instead of at the middle. The variation in the length of the outer lobe of the maxilla in *N. ephippiata* is remarkable, and the species connects the genus *Nemognatha* with *Zonitis*.

9. **Nemognatha immaculata.**

Nemognatha immaculata, Say, Journ. Acad. Phil. i. p. 22 (1817)[1]; Amer. Ent. t. 3 (1817), and 2nd edit. i. t. 7 (1824)[2]; Complete Writings, i. p. 13, and ii. p. 3[3]; Lec. Proc. Acad. Phil. vi. p. 348[4], and Trans. Am. Ent. Soc. viii. p. 214[5].

Hab. NORTH AMERICA, Missouri[1 2 3], Santa Fé[4], Kansas[5], Colorado[5], New Mexico[5]. —MEXICO, Santa Clara in Chihuahua (*Höge*).

Found in abundance by Höge in Chihuahua. This species may be easily known by its uniform pale greenish-yellow colour, shining surface, and glabrous thorax and elytra; the thorax is smooth and as long as wide, and the elytra are sparsely, very coarsely, irregularly punctured, with two fine lines on the disc showing through from beneath. The head is obliquely and rapidly narrowed in front of the eyes. *N. immaculata* is recorded as having been found in plenty upon thistle-flowers.

10. **Nemognatha tarasca.** (Tab. XVII. fig. 14, vittate form.)

Nemognatha tarasca, Dugès, An. Mus. Michoacano, ii. p. 112 *bis*[1].

Flavo-testaceous or testaceous, shining, each elytron usually with a broad piceous or brownish vitta on the disc extending from the base to the apex—sometimes extended and leaving only the sutural and lateral margins pale, sometimes entirely obliterated; the antennæ, the tips of the mandibles, the palpi, and eyes, and sometimes the labrum in part, piceous or black; the legs testaceous or flavo-testaceous, the tibiæ and tarsi usually more or less infuscate; beneath testaceous, the venter sometimes piceous; the prothorax and elytra glabrous, the head and the under surface very finely pubescent. Head rather coarsely punctured, thickly so in some examples, more sparsely so in others; the mandibles considerably elongated and the labrum large; the outer lobe of the maxillæ about as long as the head; palpi slender, elongate; antennæ elongate, filiform, the second joint a little shorter than the third; prothorax convex, subquadrate, nearly or quite as long as broad, usually a little dilated at the base, rounded at the sides in front, with a few very widely scattered punctures, and sometimes with indications of a short impressed median line behind the middle; scutellum depressed, thickly punctured anteriorly; elytra convex, subparallel, each with three raised lines or costæ extending from the base nearly to the apex, the two inner ones usually

very sharply defined, for the rest coarsely and rather sparsely punctured; the outer spur of the hind tibiæ stouter than the inner one, spoon-shaped; beneath with the ventral surface in the male dull, and densely and finely punctured, in the female shining and sparsely punctate; sixth ventral segment in the male cleft down the middle, the fifth unimpressed.

Var. α. Larger; the elytra pale greenish-yellow; the legs, the tarsi and knees excepted, flavous.

Length 7–12 millim. (♂ ♀.)

Hab. Mexico, Morelia (*Leon* [1]), Chilpancingo (*H. H. Smith*), Etla, Tuxtla, Yucatan (*Sallé*), Temax in North Yucatan (*Gaumer*); Guatemala, San Gerónimo (*Champion*); Nicaragua, Chontales (*Belt*); Panama, near the city (*Champion*).

Notwithstanding various discrepancies from the description (which is apparently based on a single specimen), I have very little doubt that I have correctly identified Dugès' species. It is advisable, however, to give a renewed description from the large number of specimens received, the species being a very variable one.

The species is common in Yucatan, but is apparently rare elsewhere. About three-fourths of the Yucatan examples, and the one from Chontales also, have a broad piceous or brownish vitta on each elytron; in the other examples the elytra, as stated in Dugès' description, are entirely brownish-yellow. Of the var. α we have three specimens, one from Etla and a pair from San Gerónimo. Two examples—one from Chilpancingo and one from Panama—have the head and thorax more thickly punctured, but they are connected with the type by intermediate gradations. It is probable that our Yucatan specimens are somewhat discoloured and that the ground-colour of the elytra is pale greenish-yellow, as in var. α. *N. tarasca* is closely allied to *N. immaculata*, Say, and has the thorax and elytra glabrous as in that species; it differs from it, however, by the three well-marked raised lines or costæ of the elytra, the latter more closely and not so coarsely punctured. The thorax is very sparsely but quite distinctly punctured, instead of being almost impunctate as in *N. immaculata*, and the head is more prolonged in front than in that species. *N. punctipennis*, Lec., from Arizona, and *N. dunniana* (Casey), from Texas, are also allied forms; the former has the head more prolonged in front*, and the latter has the elytra more coarsely and more sparsely punctured. Labelled *N. marginata*, Pilate, in the Sallé collection.

11. **Nemognatha zonitoides.** (Tab. XVII. fig. 15.)

Nemognatha zonitoides, Dugès, La Naturaleza, iii. p. 47, t. 2. figg. 1, 1 *a–h* [1]; An. Mus. Michoacano, ii. p. 110 *bis* [2].

Hab. Mexico (*coll. F. Bates*), San Pedro, Parras, and Saltillo in Coahuila (*Dr. Palmer*), Monterey in Nuevo Leon, Villa Lerdo in Durango, Chilpancingo, Tonila in Colima (*Höge*), Rincon in Guerrero (*H. H. Smith*), Guanajuato (*Dugès* [1 2], *Sallé*), Morelia (*Dugès* [2]), Temax in North Yucatan (*Gaumer*); Guatemala, San Gerónimo (*Champion*).

A common and widely distributed species in the highlands of Mexico and Guatemala,

* As I am informed by Dr. Horn, who has examined one of our Yucatan specimens.

extending northwards to near the Mexican frontier. *N. zonitoides* agrees very nearly with Leconte's description of *N. cribricollis* (=*porosa* and *fuscipennis*, Lec. (Trans. Am. Ent. Soc. viii. p. 215), but it has the head black. This species has the head considerably prolonged in front and very long mandibles, and in this respect (as Leconte remarks of *N. cribricollis*) resembles *Gnathium*. The colour of the thorax, elytra, and legs is variable. The specimens from Coahuila and Guatemala have the elytra more closely and less coarsely punctured than in most of those from the intervening localities, but they are connected by intermediate forms. The length (with the head fully extended) varies from $4\frac{1}{2}$–9 millim. Labelled *N. egena*, Dej., in Mr. F. Bates's collection. Dr. Horn, Trans. Am. Ent. Soc. xii. p. 108, states that *N. zonitoides*, Dugès, is most closely related to but distinct from *N. sparsa*, Lec.

12. **Nemognatha flava.** (Tab. XVII. fig. 16.)

Gnathium flavum, Dugès, An. Mus. Michoacano, ii. p. 107 *bis*[1].

Hab. Mexico, Jalapa (*Flohr*[1], *Höge*); Guatemala, Coban (*Conradt*); Costa Rica (*Van Patten*).

We have received ten examples of this species—seven from Mexico, two from Guatemala, and one from Costa Rica. This insect has the thorax longer than broad, considerably narrowed in front, and constricted before the apex, the disc transversely depressed anteriorly and with a well-marked median channel, the surface densely and finely punctured. The elytra are very densely and finely punctured, with the interspaces somewhat granular. The antennæ are elongate and filiform, black. The upper surface is opaque, flavous or flavo-luteous, and clothed with fine, short, golden pubescence. The outer lobe of the maxillæ is longer than the head, the head itself prolonged in front, and the mandibles are elongate (as in *N. zonitoides*). The legs are variable in colour. In two or three examples the head has a narrow transverse space between the eyes infuscate.

13. **Nemognatha atra.**

Gnathium atrum, Dugès, An. Mus. Michoacano, ii. p. 113 *bis*[1].

Hab. Mexico, Tupataro[1] (*Sallé*).

M. Sallé has recently forwarded me an example of this species. It is closely allied to *N. zonitoides*, from which it differs by its entirely black thorax and coarser punctuation. The thorax is more depressed in front, and the punctuation of the head is particularly coarse.

GNATHIUM.

Gnathium, Kirby, Trans. Linn. Soc. xii. p. 425 (1818); Horn, Trans. Am. Ent. Soc. iii. p. 94.

This genus only differs from *Nemognatha* in having the antennæ shorter and gradually thickened outwardly. *Gnathium* contains four species, all from the United States or Mexico *. The two Mexican species referred to it by Dugès belong to *Nemognatha*; they have the thorax formed as in *Gnathium*.

1. Gnathium francilloni.

Gnathium francilloni, Kirby, Trans. Linn. Soc. xii. p. 426, t. 22. fig. 6 [1]; Blanch. in Cuvier's Règne Anim., Ins. i. t. 55. fig. 6.
Nemognatha flavicollis, Lec. Journ. Acad. Phil. 2nd ser. iv. p. 23 (1858) [2].
Gnathium flavicolle, Horn, Trans. Am. Ent. Soc. iii. p. 95 [3].

Hab. North America, Georgia [1], Texas [2].—Mexico, Durango city (*Höge*).

A single specimen from Durango city seems to belong to this species. It has the thorax elongate-campanuliform in shape, with a very few, fine, widely separated punctures; the elytra coarsely and roughly, but sparsely, punctured. There can be little doubt as to the identity of Kirby's and Leconte's species. Kirby's definition "thorax brevissimus" is evidently a misprint for "thorax longissimus," as his figure clearly shows; his type is lost. The head, elytra, under surface, and legs are piceous; the thorax is flavo-testaceous.

2. Gnathium minimum. (Tab. XVII. fig. 17, var.)

Nemognatha minima, Say, Journ. Acad. iii. p. 306 (1824) [1]; Complete Writings, ii. p. 171 [2].
Gnathium minimum, Horn, Trans. Am. Ent. Soc. iii. p. 94 [3].
Gnathium walckenaeri, Casteln. Hist. Nat. Ins., Col. ii. p. 281 [4].
Nemognatha longicollis, Lec. Proc. Acad. Phil. x. p. 77 [5].

Hab. North America [1], Rocky Mountains [2], Kansas [3], New Mexico [3], and Texas [3 5].—Mexico, Northern Sonora (*Morrison*), Vera Cruz [4] (*Sallé*).

In this species the thorax and elytra are coarsely and somewhat closely punctured; the upper surface is usually testaceous, the underside darker. *G. longicolle* (Lec.) is probably a dark form of *G. minimum*; it is not noticed by Dr. Horn in his Monograph of the genus. The Sonora specimens have the suture and the sides of the elytra infuscate, very much as in *G. longicolle*.

3. Gnathium nitidum.

Gnathium nitidum, Horn, Trans. Am. Ent. Soc. iii. p. 95 [1].

Hab. North America, California [1].—Mexico (*coll. F. Bates*), Villa Lerdo in Durango (*Höge*).

* *G. subcinctum*, Luc., from Brazil, belongs to another genus.

The two specimens captured by Herr Höge at Villa Lerdo are apparently immature; they have the elytral punctuation very indistinct.

Distinguished from *G. minimum* by the much smoother thorax and elytra; the colour above and beneath is testaceous.

ZONITIS.

Zonitis, Fabricius, Ent. Syst. p. 126 (1775); Lacordaire, Gen. Col. v. p. 685; Horn, Trans. Am. Ent. Soc. v. p. 155.

This genus contains upwards of one hundred described species, very few of which are from the New World. Six species have been recorded from the United States and six from Mexico, but not one from the South-American continent*. Four are here added from Mexico or Central America. In *Z. nigromaculata* and some other species of this genus the outer lobe of the maxillæ is furnished with several coarse spiny setæ. *Z. nigromaculata* and *Z. fulva* approach the Australian genus *Palæstra* in the form of the antennæ. Our species may be tabulated thus:—

Eyes small.
- Antennæ filiform or subfiliform.
  - Thorax transverse; elytra metallic . . . . . Species 1.
  - Thorax nearly or quite as long as broad, more or less campanulate; elytra not metallic . . . . . Species 2–6.
- Antennæ gradually becoming thinner towards the tip, very elongate . . . . Species 7.
- Antennæ strongly setaceous; the three basal joints stout, equal . . . . . Species 8, 9.

Eyes very large, subcontiguous beneath, rather narrowly separated above . . . . Species 10.

1. **Zonitis flohri.** (Tab. XVII. fig. 18.)

Zonitis flohri, Dugès, An. Mus. Michoacano, ii. p. 110 *bis* [1].

Hab. Mexico (*coll. F. Bates*), Vera Cruz (*Flohr* [1]), Orizaba (*Sallé*), Jalapa (*Höge*).

Found in abundance by Herr Höge at Jalapa. Dugès' description [1] appears to have been made from a greasy or discoloured specimen. This insect much resembles the var. β of *Nemognatha cœruleipennis*, Perty, but it has the elytra dull instead of shining. The head (the eyes excepted), thorax, and under surface, the femora, and the base of the tibiæ are flavo-testaceous, the rest of the legs and the antennæ piceous or black; the elytra are metallic blue or violaceous (more obscure in greasy examples), opaque. The head is triangular, broad, short; the thorax is strongly transverse, narrowed and broadly rounded at the sides anteriorly, and has a deep transverse depression on either side in front and a deep median groove behind, the surface with fine, widely scattered punctures; the elytra are very densely, confluently, finely punctured, with the interspaces somewhat granular; the under surface is closely and finely punctured. In the

* Undescribed South-American species exist in collections.

male the fifth ventral segment is transversely depressed in the middle behind, and the sixth segment is cleft down the centre. Our numerous specimens of this species exhibit no variation in the colour of the head, thorax, or underside.

2. **Zonitis rufa.**

Zonitis rufa, Lec. Proc. Acad. Phil. vii. p. 85 [1]; Horn, Trans. Am. Ent. Soc. v. p. 155 [2].
Zonitis rubra, Dugès, La Naturaleza, i. p. 166, t. 2. fig. 13 [3]; An. Mus. Michoacano, ii. p. 107 *bis* [4].

Hab. North America, Frontera, Rio Grande [1].—Mexico (*Sallé, ex coll. Sturm*; *coll. F. Bates*), Mexico city (*Dr. Palmer*), Parada (*Sallé*), Guanajuato [3 4], Tupataro [4] (*Dugès*).

We have received four examples of this species from Mexico. It may easily be known by the uniform sanguineous colour of the upper surface. The antennæ, legs, and under surface, the rufous venter excepted, are black. Dr. Horn describes [2] the body above and beneath as pale sanguineous.

3. **Zonitis tenebrosa.** (Tab. XVII. fig. 19.)

Elongate, narrow, rather depressed, subparallel, opaque, finely pubescent; black, the head brownish at the sides and in front, the prothorax at the sides (except just before the middle laterally, as seen from above) brownish-yellow; beneath, the antennæ, and legs black; the entire upper surface very densely and finely punctured. Head broader than long, about as wide as the prothorax, with the mandibles comparatively short and the labrum strongly transverse; the eyes transverse, convex, rather small; antennæ long, filiform, the joints of uniform thickness, 2 and 3 equal in length, 4–7 more elongate, subequal; prothorax subcampanulate, parallel at the sides behind, as long as broad, somewhat flattened on the disc, and with a fine, impressed, median line; elytra elongate, rather narrow, subparallel; beneath shining, more sparsely punctured; hind tibial spurs moderately stout, subequal; sixth ventral segment cleft and deeply excavate in the middle in the male.
Length 8½ millim. (♂.)

Hab. Mexico, Tacambaro in Michoacan (*Höge*).

One example only of this peculiar little species has been received. It is not very closely allied to any described *Zonitis* known to me.

4. **Zonitis atra.**

Zonitis atra, Dugès, La Naturaleza, v. p. 146, t. 4 *a*. figg. 11, 11 *a–c* [1]; An. Mus. Michoacano, ii. p. 108 *bis* [2].

Hab. Mexico, Leon [2], Guanajuato [1] (*Dugès*).

Described from a single mutilated male example, found dead, upon a hill at Leon, in the State of Guanajuato. The following is a translation of its principal characters:—Black; mandibles very large, about as long as the head, arched, pointed at the tip; head quadrate, with the hind angles prominent, covered with irregular but numerous punctures or depressions, and with a fine median groove; the antennæ elongate, subfiliform, slightly dentate, with the apical joint the stoutest and broadest; the prothorax

quadrate, not so wide as the head, a little narrowed anteriorly, with a median and a very fine basal groove, the surface sculptured like the head; the elytra granulose.

5. Zonitis flavicollis.

Zonitis flavicollis, Dugès, La Naturaleza, v. p. 147, t. 4 *a*. figg. 12, 12 *a–c*[1]; An. Mus. Michoacano, ii. p. 109 *bis*[2].

Hab. Mexico, Guanajuato (*Dugès*[1 2]).

This species is unknown to me. It is described (apparently from a single male example) as black, with the prothorax yellow; the head triangular, with the hind angles rounded, coarsely rugose, with a well-marked median groove; the antennæ black, long and filiform, with the second joint scarcely smaller than the others; the thorax campanuliform, moderately elongate, with a median groove, the surface punctured; the elytra granulose; the legs and underside (the thorax excepted) black; the hind tibial spurs broad, subequal. According to Dugès' figure (12 *a*), the head is triangular, much widened behind.

6. Zonitis sanguinicollis. (Tab. XVII. figg. 20, 21.)

Moderately elongate, depressed, finely pubescent, opaque; the head varying in colour from black or piceous with the posterior portion more or less testaceous to entirely (the eyes, labrum, and mandibles excepted) flavous, the neck always flavous; the prothorax pale sanguineous; the scutellum varying in colour from black to pale sanguineous; the elytra black; beneath (the head and prothorax excepted) black, the abdomen usually with the apex or the sides and apex—in some specimens almost entirely—pale sanguineous (sometimes black, with the fifth segment testaceous), the anterior portion of the breast sometimes flavous; legs piceous or black, in some examples with the tarsi brownish or the anterior coxæ flavous. Head long and narrow, in some specimens very narrow, subparallel, with the hind angles rounded, irregularly, confluently, somewhat coarsely punctured, with an irregular smooth median space; the labrum transverse; the mandibles long, curved, pointed; the palpi piceous or black, the last joint of the maxillary pair moderately long, cylindrical, truncate at the tip; antennæ long and subfiliform, joints 2 and 3 nearly equal, 4 a little longer than 3, 5–10 decreasing slightly in length, 11 longer than 10, subacuminate; prothorax as long as or longer than broad, considerably narrowed in front, constricted at the sides before the middle, campanulate, at the base very much wider than the head, deeply depressed on either side of the middle anteriorly, and with a smooth median line or groove, the surface closely and rather coarsely, in some specimens rugosely, punctured; scutellum densely and finely punctured; elytra broad, flattened, widening a little behind, at the base about twice as wide as the prothorax, conjointly rounded at the apex, the surface finely and densely granulate throughout; beneath densely and finely punctured; hind tibial spurs rather slender, subequal; the fifth ventral segment unimpressed and broadly and semicircularly emarginate, and the sixth segment cleft down the centre, in the male.

Var. The elytra yellowish-brown, with indications of three faint lines on the disc; the head (except in front) sordid yellow; the femora and front coxæ testaceous; the second joint of the antennæ much shorter than the third.

Length 8–11 millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*), Teapa in Tabasco (*H. H. Smith*, *Höge*); Guatemala, Coban (*Conradt*), Senahu, Dueñas, Capetillo (*Champion*); Nicaragua, Chontales (*Belt*); Panama, Volcan de Chiriqui (*Champion*).

Numerous examples of the type, one only of the variety, the latter from Chiriqui.

This species is not closely allied to any other here described. It may be readily known by its long and narrow head, campanulate, sanguineous thorax, and depressed, broad, dull black, granulated elytra. The head, scutellum, and under surface vary in colour. In some of the specimens with the head flavous, the head itself is longer, narrower, and more parallel than usual. The second joint of the antennæ varies in length, it being considerably shorter than the third in some specimens. The thorax often has the punctures confluent, and when this is the case the surface is opaque, not shining. The different varieties are connected by intermediate forms.

This insect agrees in some respects with Dugès's description of *Z. flavicollis*; the colour of the thorax, however, is not yellow, but pale sanguineous; and the head is narrow and subparallel, not broadly triangular. We figure two specimens, one from Dueñas and one from Chontales.

7. **Zonitis lateritia.** (Tab. XVII. fig. 22.)

Elongate, finely pubescent, above and beneath reddish-testaceous, opaque; the eyes, the tips of the mandibles, the palpi, antennæ, tibiæ, and tarsi black. Head comparatively small, narrow, prolonged in front, with the labrum rather longer than broad and the mandibles elongate, closely and finely punctured; the eyes transverse, rather small; antennæ setaceous, very long and slender, joint 1 stout, 2 and 3 more slender, equal, 4–11 decreasing in thickness, 4–7 almost equal in length, very much longer than 3, 8–11 very slender, 11 a little longer than 10; prothorax much wider than the head, rather longer than broad, subcampanulate, considerably narrowed in front, subparallel at the sides behind, depressed on either side of the middle anteriorly, closely and finely punctured, with a well-marked smooth median line (raised before the middle and depressed behind); scutellum densely, minutely punctured; elytra elongate, widening a little posteriorly, very densely and finely punctured; beneath more sparsely punctured, shining; hind tibial spurs stout, spoon-shaped, subequal.

Length 13 millim.

Hab. NICARAGUA, Chontales (*Belt*).

One example. The small, narrow, anteriorly prolonged head, small eyes, uniform reddish-testaceous body, and black antennæ distinguish this species at a glance from *Z. megalops*.

8. **Zonitis nigromaculata.** (Tab. XVII. figg. 23; 23 *a*, maxilla and maxillary palpus.)

Zonitis nigromaculata, Dugès, An. Mus. Michoacano, ii. p. 111 *bis* [1].

Hab. MEXICO, Atoyac (*Flohr* [1]), Tuxtla (*Sallé*).

We have received four examples of this very distinct species, two from Atoyac and two from Tuxtla. It closely resembles *Nemognatha ephippiata*, but is more elongate and has a longer and narrower head, and very differently formed antennæ. The head and thorax have a black vitta on either side; the elytra have a very broad fascia below the base, extending broadly upwards along the suture to the base, and the apical third black; the rest of the upper surface is tawny-yellow. The antennæ have their five

basal joints stout, and the following ones gradually tapering to the apex; joints 1–3 are rather short, subequal, 4–6 each nearly one half longer than 3, 11 very slender. The underside is black; the coxæ and trochanters, and usually the base of the femora also, are testaceous. The elytra are a little widened posteriorly, and this character gives the insect a Lyciform appearance. The fifth ventral segment is divided down the middle in the male. *Z. nigromaculata* much resembles some species of the Longicorn genus *Pteroplatus*.

9. **Zonitis fulva.** (Tab. XVII. figg. 24, 25, varr.)

Zonitis fulva, Dugès, An. Mus. Michoacano, ii. p. 111 *bis*[1].

Hab. Mexico, Atoyac (*Flohr*[1]), Cordova (*Sallé*), Cerro de Plumas (*Höge*); Guatemala, Coban (*Conradt*).

We have not received an example of the form of this insect described by Dugès[1]. The following are, I have no doubt, colour-varieties of the same species:—

Var. α. The head with the sides and a median vitta extending forwards as far as the middle of the eyes (this marking obsolete in one example), and a rather broad line along the prothorax and scutellum in continuation of this, piceous or black; the elytra entirely reddish-yellow; the underside and legs black.

Var. β. The head, prothorax, and scutellum with a median vitta, as in α. The elytra black, with the sides to about one third from the base rather broadly reddish-yellow; or reddish-yellow, with the apical half or more, and two or three stripes extending from it forwards, black—the stripe nearest the suture extending to the base, widened anteriorly, and there confluent with the one on the opposite elytron. The underside and legs black.

The following are the chief characters mentioned by Dugès[1]:—"Tawny-yellow, with the antennæ, the apices of the tibiæ, the tarsi, and sometimes the sides of the abdomen black; the head triangular; the antennæ setaceous—joints 1–3 triangular and subequal, 4 longer than 3, 5–10 equal in length but decreasing in thickness, 11 subcylindrical; the thorax long, campanulate, with a well-marked dorsal groove, the surface very densely punctured; the elytra separately rounded at the apex, pubescent."

The insect has a very Lyciform appearance. The elytral pubescence is dense, and of a brick-red colour, the surface beneath being yellowish. The antennæ are strongly setaceous, the joints from the fifth rapidly diminishing in thickness. The entire upper surface is very densely and finely punctured.

Both the varietal forms were obtained at Cordova.

10. **Zonitis megalops.** (Tab. XVII. fig. 26, ♂.)

Elongate, parallel, opaque, finely pubescent; brownish-testaceous, the head in front, an ill-defined median vitta on the prothorax, and a similar mark on the scutellum, reddish-brown, the eyes black, the tips of the mandibles and the palpi piceous, the base of the elytra slightly infuscate (perhaps owing to discoloration); the antennæ piceous, with the base of each joint very narrowly testaceous; beneath pitchy-brown; the legs testaceous, with the middle of the femora, the apices of the tibiæ, and the tarsal joints (except at the base) stained with fuscous. Head as wide as the prothorax, rounded at the sides behind, moderately prolonged anteriorly, densely and finely punctured, more coarsely so in front; the labrum about as broad

as long, the mandibles rather elongate; the eyes very large, deeply emarginate, almost contiguous beneath and rather narrowly separated above; last joint of the maxillary palpi elongate, subcylindrical, truncate at the tip; antennæ nearly as long as the body, very slender, subfiliform, joints 2 and 3 subequal, 4 nearly twice as long as 3, 4–6 subequal, 7–11 a little thinner and rather shorter; prothorax longer than broad, flattened on the disc, subcampanulate, gradually narrowing from the middle to the apex, subparallel at the sides behind, densely, finely, confluently punctured, and with an impressed median line; scutellum densely, minutely punctured; elytra elongate, parallel, very densely and finely punctured; beneath more shining, closely and finely punctured; hind tibial spurs rather stout, spoon-shaped, subequal; sixth ventral segment very deeply triangularly emarginate in the male.

Length 12½ millim. (♂.)

Hab. GUATEMALA, Volcan de Atitlan 3000 feet (*Champion*).

One male specimen, apparently immature. A species readily recognizable by its exceedingly large eyes, very long and slender antennæ, elongate, subcampanuliform thorax, and very dense, fine punctuation. The upper surface is obscure testaceous, opaque, and on the thorax and scutellum there is a reddish-brown median vitta. The antennæ and tarsi have an annulated appearance, the extreme base of their articulations being pale testaceous. The antennæ are very slender, and become slightly thinner towards the tip.

To judge from the description, *Z. megalops* approaches *Z. longicornis*, Horn, from Illinois, in some of its characters.

Group **CANTHARIDES.**

TETRAONYX.

Tetraonyx, Latreille, in Humboldt & Bonpland's Obs. Zool. i. p. 160 (1811); Lacordaire, Gen. Col. v. p. 673; Haag, Stett. ent. Zeit. 1879, p. 249; Horn, Trans. Am. Ent. Soc. xii. p. 116.
Picnosæus, Solier, in Gay's Hist. fis. y polit. de Chile, v. p. 281 (1851).
Jodema, Pascoe, Journ. Ent. i. p. 57 (1860).

An exclusively American genus, and particularly rich in species in the tropical regions of the Southern continent; it extends southwards to Chili and the Argentine Republic and northwards to the Southern United States, and is also represented in the Antilles. Haag in his Monograph (Stett. ent. Zeit. 1879, pp. 249 *et seq.*) enumerates seventy-five species as belonging to it, thirteen of which occur within our limits; of these latter, however, three are not represented in the collections before me, and the locality is in two cases doubtful. Three species only have been recorded from north of the Mexican frontier: one of these, *T. quadrimaculatus* (Fabr.), is almost certain to be found eventually in Mexico; the other two are known to be Mexican. Some of the species, *T. sexguttatus* &c., are extremely variable as regards the colour and markings of the elytra. The males in this genus have the sixth ventral segment deeply emarginate; and in some cases, *T. fulvus*, *T. frontalis*, &c., the front tarsi dilated, with their

basal joint angularly produced within. The following key will assist in the identification of the Central-American species:—

Upper surface uniformly dull cyaneous	Species 1.
Head and thorax black, the elytra spotted or fasciate	Species 2–4.
Head and thorax luteous, the elytra black	Species 5.
Head and elytra black; the thorax flavous, with a large angulated black median patch	Species 6.
Head and elytra black, the thorax flavous, immaculate	Species 7.
Flavous or flavo-testaceous; each elytron with a large basal and a large apical spot black	Species 8, 9.
Rufous or fulvous, the head not darker in front	Species 10–12.
Fulvous, the head black in front	Species 13.

1. **Tetraonyx pectoralis.**

Tetraonyx pectoralis, Haag, Stett. ent. Zeit. 1879, p. 257 [1].

Hab. NICARAGUA, Chontales (*Janson*).—COLOMBIA [1].

One specimen from Chontales, agreeing perfectly with others from Colombia. Haag states [1] (perhaps by mistake) that the posterior margin of the mesosternum is bright rufous: in the specimens before me determined by him the mesosternum is entirely cyaneous and the posterior coxæ are in great part luteous- or reddish-yellow *. A large species, of a uniform dull cyaneous or greenish-cyaneous colour. *T. pectoralis* is very closely allied to *T. crassus* (Klug), from Brazil, but differs from it by the denser and finer punctuation of the upper surface and by the cyaneous hind coxæ.

2. **Tetraonyx sexguttatus.** (Tab. XVIII. figg. 1–6.)

Mylabris sexguttatus, Oliv. Ent. iii. no. 47, p. 11, t. 2. fig. 15 [1].

Lytta (*Tetraonyx*) *sexguttata*, Klug, Nova Acta Acad. Leop.-Carol. xii. p. 449 [2].

Tetraonyx sexguttatus, Blanch. in Cuvier's Règne Anim., Ins. i. t. 55. fig. 2 [3]; Haag, Stett. ent. Zeit. 1879, p. 259 [4].

Mylabris atrata, Fabr. Syst. Eleuth. ii. p. 83 [5].

Tetraonyx proteus, Haag, Stett. ent. Zeit. 1879, p. 260 [6]; Dugès, An. Mus. Michoacano, ii. p. 106 *bis* [7].

Tetraonyx ochraceoguttatus, Dugès, La Naturaleza, v. p. 140, t. 4 *a*. fig. 1 [8].

Hab. MEXICO, Oaxaca [6], Mirador [6], Vera Cruz [6 7 8] (*Sallé*), Jalapa (*Höge*); GUATEMALA [6], San Gerónimo (*Champion*); HONDURAS [6] (*Sallé*); NICARAGUA, Granada [6] (*Sallé*), Chontales (*Janson*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*), Chiriqui [6].—SOUTH AMERICA, Surinam [1], Brazil [4], Rio Janeiro [2].

An extremely variable species, five of the varieties of which have been named by

* The same remark applies to his description of *T. bipartitus*.

Haag[6]. This author has separated the Mexican and Central-American forms from *T. sexguttatus* under the collective name of *T. proteus*; but in this I am unable to follow him. The form described by Olivier and Klug has three rounded spots on each elytron, and some of our Mexican examples (one of which has been determined by Haag himself as *T. sexguttatus*) agree exactly in this respect with Brazilian ones.

In addition to the five varieties named by Haag, I have to notice two others:—

Var. *α. humboldti*, Haag (=*ochraceoguttatus*, Dugès).—Size large; the elytra black, with three large orange spots (2, 1), the posterior one broad.—Mexico, Surinam, Brazil.

Var. *β. biguttatus*, Haag.—Smaller; the elytra with the two anterior spots partly or entirely connected, and the posterior one large and more or less excised, these markings forming two angulated fasciæ. (Figg. 1, 2.)—Mexico, Honduras, Nicaragua, Chiriqui.

Var. *γ. sanguinolentus*, Haag. Large; the elytra black, with two orange or rufo-fulvous fasciæ extending completely across, the anterior one more or less angulated, the posterior one broad. (Fig. 3.)—Mexico.

Var. *δ*. Large; the elytra black, with two narrow rufo-fulvous fasciæ, and the sides, base, and apex narrowly margined with the same colour. (Fig. 4.)—Guatemala.

Var. *ε. sellatus*, Haag.—Large; the elytra orange, with the base and apex black. (Fig. 5.)—Mexico.

Var. *ζ*. Large; the elytra red, with a scutellar patch, two spots placed transversely on the disc beyond the middle, a spot at the inner apical angle, and the apex itself, narrowly, black. (Fig. 6.)—Guatemala.

Var. *η. centromaculatus*, Haag. Large; the elytra orange, with a rounded spot below the scutellum black.—Loc.?

Several of these varieties occur together at the same places; and though the typical form is common to Mexico and Tropical South America, I have not seen examples of it from intermediate localities. South-American specimens seem to vary very little.

3. **Tetraonyx octomaculatus.**

Tetraonyx octomaculatus, Latr. in Humboldt & Bonpland's Obs. Zool. i. p. 160, t. 16. figg. 7, 7 *a*[1]; Casteln. Hist. Nat. Ins. Col. ii. p. 276[2]; Haag, Stett. ent. Zeit. 1879, p. 311.

Hab. ? Mexico[2], Jalapa *[1].

This species, the type of the genus, has not been identified by modern writers. It is black, each elytron with four blood-red spots—two at the base (one median, in the form of a narrow band, the other humeral, triangular) and two at the middle (placed transversely). Latreille states that the insect was found upon the Liquidambar[1]. *T. octomaculatus* is an ally of *T. sexguttatus* (Oliv.); but it can scarcely be a variety of it.

* The locality mentioned by Latreille is "Xalapa, New Spain"; Castelnau gives Mexico, but this requires confirmation, there being several places of this name in America.

4. **Tetraonyx batesi.** (Tab. XVIII. fig. 7.)

Tetraonyx batesi, Haag, Stett. ent. Zeit. 1879, p. 267 [1].

Hab. Mexico, Tepansacualco, Oaxaca [1] (*Sallé*), Juquila (*Boucard* [1], *Sallé*), Tehuantepec (*Höge*), Teapa in Tabasco (*H. H. Smith*); Guatemala [1] (*coll. F. Bates*).

We have received five specimens of *T. batesi* from Mexico, and there is a Guatemalan example of it in Mr. F. Bates's collection. This insect is black above and beneath; the elytra yellow or luteous-yellow, with eleven black spots of variable size arranged thus—five on each elytron, placed transversely, 2, 2 (sometimes coalescent), 1, and one at the suture below the scutellum.

5. **Tetraonyx bipartitus.** (Tab. XVIII. fig. 8.)

Tetraonyx bipartitus, Haag, Stett. ent. Zeit. 1879, p. 267 [1]; Dugès, An. Mus. Michoacano, ii. p. 107 *bis* [2].

Hab. Mexico, Mirador [1] (*Sallé*), Almolonga (*Flohr* [2]); Nicaragua, Chontales (*Belt*).

We have received two specimens of this species—a female from Mirador and a male from Chontales. The latter is of very large size (21 millim. in length); it has the sixth ventral segment very deeply, semicircularly excised at the apex. Easily separable from our other species by the luteous or fulvous-yellow head and thorax and black elytra.

6. **Tetraonyx bicolor.**

Tetraonyx bicolor, Serv. Encycl. Méthod. x. p. 596 [1]; Haag, Stett. ent. Zeit. 1879, p. 265 [2].
Tetraonyx ventralis, Chevr. in Guérin's Icon. Règne Anim., Ins. p. 134, t. 35. fig. 8 [3].

Hab. Nicaragua, Chontales (*Janson*).—Brazil [1 2 3].

In this species the head (the occiput excepted) and elytra are black, and the thorax is flavo-testaceous, with a large angular black patch on the disc.

7. **Tetraonyx sallæi.** (Tab. XVIII. fig. 9.)

Tetraongx sallei, Haag, Stett. ent. Zeit. 1879, p. 299 [1].

Hab. Mexico, Cordova (*Sallé* [1]).

A small species, entirely black with the exception of the thorax, the latter flavo-testaceous (not sanguineous, as stated by Haag). The thorax is very strongly transverse and somewhat sharply carinate at the sides behind.

8. **Tetraonyx bimaculatus.**

Lytta bimaculata, Klug, Nova Acta Acad. Leop.-Carol. xii. p. 448, t. 41. fig. 10 [1].
Tetraonyx bimaculatus, Lacord. Gen. Col. v. p. 674, nota [2]; Haag, Stett. ent. Zeit. 1879, p. 307 [3].

Hab. Mexico (*coll. F. Bates*).—Brazil [1 2 3].

In Mr. F. Bates's collection there is a Mexican specimen of a *Tetraonyx* agreeing perfectly with Klug's excellent figure of *T. bimaculatus*; and this specimen has been so named by Haag. *T. bimaculatus* chiefly differs from *T. maculatus* by having the basal black spot of the elytra extending to the humeri, and the transverse flavous space behind this spot broader; the head is black. The basal joint of the anterior tarsi is very stout, and dilated on the inner side, in the male. *T. quadrimaculatus* (Fabr.), from the Southern States and the Antilles, is an allied species; it has the thorax closely punctured.

9. **Tetraonyx maculatus.** (Tab. XVIII. fig. 10.)

Tetraonyx maculatus, Casteln. Hist. Nat. Ins. Col. ii. p. 277 [1]; Haag, Stett. ent. Zeit. 1879, p. 306 [2].
Tetraonyx maculicollis, Deyr. in litt.

Hab. Mexico, Jalapa (*Höge*), Vera Cruz (*Sallé*, *H. H. Smith*); Guatemala, Cerro Zunil (*Champion*); Nicaragua, Granada (*Sallé*).—Brazil [1 2].

We have received nine specimens of a *Tetraonyx* agreeing very well with Haag's definition of *T. maculatus*, Casteln. A small species, of a flavous or flavo-testaceous colour; the elytra each with two very large black spots—one basal, not quite reaching the suture and more or less excised near the shoulders in front, the other apical, the latter confluent with the one on the opposite elytron; the antennæ, the apices of the femora, the tibiæ, and tarsi black; the underside reddish-testaceous. The head is sometimes partly brownish, and the thorax often has a piceous or brownish patch, or two small spots placed transversely, on the middle of the disc. Haag appears to have examined some of Sallé's Mexican and Nicaraguan examples; but the only locality mentioned by him [2] is Brazil.

In Sallé's collection the specimens with the thorax immaculate are labelled *T. maculatus* and those with the thorax spotted *T. maculicollis*. The basal joint of the anterior tarsi is slightly widened in the male.

10. **Tetraonyx decipiens.**

Tetraonyx decipiens, Haag, Stett. ent. Zeit. 1879, p. 269[1].

Hab. Mexico (*coll. Haag* [1]).

"Subelongate, rufous; the antennæ, the scutellum in the middle, the sides and hind margin of the mesosternum (? hind coxæ), the apices of the femora, the tibiæ, and tarsi blackish; head and thorax shining, the latter strongly transverse, canaliculate, and impressed on both sides, sparsely punctured; elytra opaque, rufous-pilose. Length 9, breadth $4\frac{1}{2}$ millim."

11. **Tetraonyx angulicollis.**

Tetraonyx angulicollis, Haag, Stett. ent. Zeit. 1879, p. 270[1].

Hab. Mexico? (*coll. Haag*[1]).

This species is unknown to me, and is doubtfully Mexican. It is described as "Elongate, rufous, the antennæ, the femora in part, and the tibiæ and tarsi black; the thorax transverse, with all the angles very prominent, longitudinally tri-impressed, shining, impunctate; the scutellum and elytra opaque, rufous-pilose. Long. 7, lat. 4 millim."

12. **Tetraonyx fulvus.**

Tetraonyx nigritarsis, Sturm, Cat. p. 175 (1843) (sine descr.)[1].

Tetraonyx fulva, Lec. Proc. Acad. Phil. vi. p. 344 (1853)[2]; Horn, Trans. Am. Ent. Soc. xii. p. 116[3].

Tetraonyx fulvus, Haag, Stett. ent. Zeit. 1879, p. 288[4]; Dugès, An. Mus. Michoacano, ii. p. 112[5].

Tetraonyx rufus, Dugès, La Naturaleza, i. p. 105, t. 4 *a*. fig. 7[6].

Hab. North America, Texas[3], New Mexico[2 3 4].—Mexico[1] (*ex coll. Sturm*), Parras in Coahuila (*Dr. Palmer*), Villo Lerdo in Durango, Irapuato (*Höge*), Guanajuato[2] (*Dugès*[5 6], *Sallé*), Leon (*Dugès*[5]).

Apparently a common insect in the highlands of Northern Mexico, whence we have received a large number of examples. Allied to *T. frontalis*, but easily separable therefrom by the upper surface being more sparsely punctured and somewhat shining, the head not black in front, and the femora and tibiæ in great part flavo-testaceous. In the male the anterior tarsi are dilated, and the first joint is angularly produced on the inner side.

13. **Tetraonyx frontalis.** (Tab. XVIII. fig. 11.)

Tetraonyx frontalis, Chevr. Col. Mex., Cent. i. fasc. 1, no. 59[1] (1834); Dugès, La Naturaleza, i. p. 105[2]; Haag, Stett. ent. Zeit. 1879, p. 287[3]; Dugès, An. Mus. Michoacano, ii. p. 111[4]; Horn, Trans. Am. Ent. Soc. xii. p. 116[5].

Tetraonyx cinnamomea, Sturm, Cat. p. 175 (1843)[6].

Hab. North America, Texas[5].—Mexico[3 6] (*ex coll. Sturm*), Mochitlan in Guerrero (*Baron*), Amula and Xautipa in Guerrero (*H. H. Smith*), Mexico city, Jalapa (*Höge*), Parada, Juquila, Puebla, Toxpam, Cordova, Orizaba[1 2] (*Sallé*), Oaxaca (*coll. F. Bates*), Vera Cruz (*Dugès*[4]); Guatemala, El Tumbador, San Gerónimo (*Champion*).

Var. The median third of all the femora flavo-testaceous.

Tetraonyx femoralis, Dugès, La Naturaleza, i. p. 104, t. 1 *a*. fig. 8[7]; Haag, Stett. ent. Zeit. 1879, p. 287[8]; Dugès, An. Mus. Michoacano, ii. p. 111[9]; Horn, Trans. Am. Ent. Soc. xii. p. 116[10].

Hab. North America, Arizona[10].—Mexico, Northern Sonora (*Morrison*), Uruapan,

Morelia (*Dugès*[9]), Tacambaro in Michoacan, Mexico city, Jalapa (*Höge*), Guanajuato[8] (*Sallé*, *Dugès*[7 9], *Höge*).

A common species in Mexico, extending over the northern frontier into the United States and southwards into Guatemala. The variety *femoralis* has been received from two localities in company with the typical form, and I have not the slightest doubt that it is conspecific with it. Haag mentions[3] two other varieties:—(1) "Capite nigro-lineato, thorace nigro-bimaculato, scutello apice nigro, femoribus anticis rufomaculatis"; (2) "Capite nigro, post oculos rufomaculato; thorace bimaculato; scutello nigro." In the male the anterior tarsi are dilated, and the basal joint is angularly produced within. *T. frontalis* has much the facies of a large *Pyrochroa*. It may be easily distinguished from *T. fulvus* by the head being black in front, and by the more densely punctured opaque upper surface.

EUPOMPHA.

Eupompha, Leconte, Journ. Acad. Phil. 2nd ser. iv. p. 21 (1858); Leconte & Horn, Class. Col. N. Am. 2nd edit. p. 422 (1883).

A single species only of this remarkable genus is known, peculiar to New Mexico and Texas, and the adjacent country to the southward. It has the vertex elevated and deeply cleft; and the lower portion of the tarsal claws shorter than the upper and connate with it.

An allied genus, *Phodaga*, Lec., containing a single species, *P. alticeps*, Lec., occurs in Arizona; it will probably be found eventually in Northern Mexico.

1. **Eupompha fissiceps.** (Tab. XVIII. fig. 13, ♂.)

Eupompha fissiceps, Lec. loc. cit. p. 21[1]; Lec. & Horn, loc. cit.[2]; Dugès, An. Mus. Michoacano, ii. p. 108 *bis*[3].

Hab. North America, Llano Estacado, Texas (?)[1], New Mexico[2].—Mexico, Coahuila (*Dr. Horn*), Villa Lerdo in Durango (*Flohr*[3], *Höge*).

Found in some numbers by Höge during his second Mexican expedition. This insect has the thorax and elytra of a brilliant metallic bluish-green or golden-coppery colour, and the head in part and the legs ferruginous. In the male the three basal joints of the anterior tarsi are greatly swollen, convex beneath and deeply excavated above; these joints appear, at first sight, to have their under surface uppermost. Dr. Horn informs me that he has received specimens of *E. fissiceps* from Coahuila.

CALOSPASTA.

Calospasta, Leconte, Class. Coll. N. Am. p. 273 (1862); Horn, Trans. Am. Ent. Soc. iii. p. 92 (1870); Leconte & Horn, Class. Coll. N. Am. p. 421 (1883); Horn, Proc. Am. Phil. Soc. xxix. p. 99 (1891).

Nine species are known of this genus, all from the Southern United States, chiefly from Southern California. One of these crosses the Mexican boundary into Coahuila. A single species is now added from Western Mexico. *Calospasta* is closely allied to *Eupompha*, but differs from it by the vertex being much less raised. The lower portion of the tarsal claws is a little shorter than the upper and connate with it. *C. sulcifrons* resembles *Eupompha* in having the three basal joints of the anterior tarsi smooth and greatly swollen in the male, but these joints are not grooved above as in *E. fissiceps*; this character, however, is present in the Californian *C. histrionica*, Horn. The genus *Tegrodera* is a close ally of *Calospasta*, and the single species belonging to it will probably be found eventually in Northern Mexico; it occurs in Lower California.

1. **Calospasta mirabilis.** (Tab. XVIII. fig. 12.)

Calospasta mirabilis, Horn, Trans. Am. Ent. Soc. iii. p. 93[1]; Proc. Am. Phil. Soc. xxix. pp. 99, 100[2].

Hab. North America, South-western Utah[2], Mojave Desert[2] and San Diego[2], California, Rock Spring[2] and near Fort Yuma[2], Southern Arizona[1]. — Mexico, Coahuila (*Dr. Horn*).

We are indebted to Dr. Horn for a Mexican example of this beautiful species.

2. **Calospasta sulcifrons.** (Tab. XVIII. fig. 14, ♂.)

Moderately elongate, parallel, very sparsely, finely pubescent; the head and prothorax shining, ferruginous, the former with the eyes and a narrow stripe on the vertex black, the latter with a black posteriorly widened median stripe extending from the base to the apex; the scutellum and elytra black, the latter with the sides nearly to the apex and the base rather broadly reddish-yellow, less shining than the prothorax; the underside metallic greenish or æneous; the legs black, the anterior tarsi (the apical joint excepted) ferruginous in the male. Head convex, moderately large, very sparsely, finely punctured, the front with a very deep broad channel in the middle—not reaching the vertex, and deeper and widening anteriorly in the male,—the eyes large and convex, feebly emarginate, the epistoma yellow; the labrum and palpi piceous, the apical joint of the maxillary pair testaceous, cylindrical, the mandibles not extending beyond the labrum; antennæ black with the three basal joints more or less testaceous at their base, short, filiform, similar in both sexes, the joints closely articulated—1 short, stout, thickening outwardly, 2 extremely short, 3 nearly three times as long as 2, and one-half longer than 4, 3–11 cylindrical, 4–10 subequal, 11 one-half longer than 10; prothorax narrow, longer than broad, the sides obliquely converging in front, the disc shallowly transversely depressed before the middle and also in the centre at the base, the surface very sparsely, irregularly, and finely punctured, a rather broad space down the middle impunctate; elytra nearly twice as wide as the prothorax, moderately long, parallel, flattened on the disc, finely and rugulosely punctured; beneath and the legs closely and finely punctured, the metasternum smoother; outer spur of the hind tibiæ very broad, subtruncate at the tip, the inner one slender, acute.

♂. Anterior tarsi with joints 1–4 smooth and convex above—1–3 greatly swollen, 4 feebly so, 1 much longer than 2. Sixth ventral segment triangularly emarginate.

Length 11–14, breadth 3½–4 millim. (♂ ♀.)

Hab. Mexico, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

One male and two female examples of this remarkably distinct species have been received from Mr. H. H. Smith. It is one of the most interesting of the Mexican species of Meloidæ. The elytra are comparatively broad and parallel, and flattened on the disc. The upper and under surfaces are very sparsely and finely pubescent.

MACROBASIS.

Macrobasis, Leconte, Class. Coll. N. Am. p. 272 (1862); Horn, Proc. Am. Phil. Soc. xiii. p. 88 (1873).

Apterospasta, Leconte, loc. cit.

This genus is confined to the New World, and ranges from Canada to Guiana *, its headquarters being in the Southern United States and the highlands of Mexico. From north of Mexico fifteen species are known, five of which extend into our region, whence fourteen are now recorded. Of this number two only occur south of Mexico. *Macrobasis*, as Dr. Horn remarks, is only separable from *Epicauta* by the relatively longer second joint of the antennæ. The males of most of the species, as in some *Epicautæ*, exhibit remarkable characters in the form of the basal joints of the antennæ and in the first joint of the anterior tarsi. *M. curvicornis* (Haag) (*antennalis*, Dugès), and *M. labialis*, Dugès, both from Mexico, belong to *Epicauta* as here understood.

Antennæ dissimilar in the two sexes: the basal joint elongated (in some species exceedingly so) or distorted in the male.
- Joints 2–11 more or less elongate, 2 in some species thickened and very long in the male.
  - The basal joint (♂) much flattened, broadly and angularly dilated on the inner side at or beyond the middle, and emarginate between this and the apex . . . . . Species 1, 2.
  - The basal joint (♂) narrower, very elongate and slightly curved, more or less flattened, sinuate or emarginate on the inner side before the apex . . . . . Species 3–7.
  - The basal joint (♂) very elongate and slightly curved, stout and flattened, or slender, unemarginate on the inner side before the apex . . . Species 8–11.
- Joints 2–11 comparatively short in both sexes, subovate, 2 only a little shorter than 3 . . . . . Species 12.

Antennæ similar in the two sexes, the basal joint not or scarcely longer than 2 and 3 united . . . . . Species 13, 14.

1. **Macrobasis fumosa.** (Tab. XVIII. figg. 15, ♂; 15 *a*, antenna, ♂.)

Lytta fumosa (Sturm), Haag, Berl. ent. Zeitschr. 1880, p. 40[1] (nec Germ., 1824).

Cantharis borrei, Dugès, La Naturaleza, v. p. 145, t. 4 *a*. figg. 8, 8 *a–f* (1881)[2].

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* *Lytta flagellaria*, Er., is a *Macrobasis*.

Macrobasis borrei, Dugès, An. Mus. Michoacano, ii. p. 50[3]; Horn, Trans. Am. Ent. Soc. xii. pp. 107, 109[4].

Hab. Mexico[1] (*Sallé, ex coll. Sturm*), Tupataro (*Dugès*[2 3]), Guanajuato (*Sallé*).

We have received two examples of this species, both males. The basal joint of the antennæ in this sex is moderately elongate, strongly sinuate, broadly and angularly dilated on the inner side about the middle, and concave between this and the apex, the latter truncate; the second joint is articulated to the first at the inner apical angle, and is about half the length of the first; the third and fourth joints are short, subequal. The anterior tibiæ have two spurs. The basal joint of the anterior tarsi is elongate and quite normal, and considerably longer than the second.

Lytta fumosa, Germ., from Brazil, is an *Epicauta*.

2. **Macrobasis distorta.** (Tab. XVIII. figg. 16, ♂; 16 *a*, antenna, ♂.)

Elongate, parallel, sparsely and finely pubescent; the head, prothorax, and underside testaceous or ferruginous, sometimes in part piceous, the labrum usually paler in colour; the elytra luteous or fusco-luteous; the legs testaceous or reddish-testaceous, with the knees, tibiæ, and tarsi usually darker; the elytra with the sutural and lateral margins very narrowly and a fine median line extending from the base nearly to the apex more densely clothed with paler or whitish pubescence, and sometimes with a spot on either side of the scutellum at the base and a short streak on the humeri brown-pubescent, the rest of the pubescence of the upper surface yellowish-cinereous. Head moderately large, closely and finely punctured, with a fine, sharply-defined, median line; antennæ setaceous, black, the two basal joints in the male obscure ferruginous; prothorax narrower than the head, rather longer than broad, rounded at the sides anteriorly, parallel behind, closely and finely punctured, with a fine, smooth, impressed median line; elytra long and parallel; beneath closely and finely punctured.

♂. Antennæ with the basal joint nearly as long as joints 2–5 united, very stout and much flattened, sinuous beyond the middle, broadly and angularly widened on the inner side at about one-third from the apex, and deeply emarginate between this and the tip; joint 2 stout, flattened-cylindrical, slightly longer than 3 and 4 united; joints 3–11 slender, decreasing in thickness, 3 shorter than 4; joints 1 and 2 shining, sparsely punctured, 3–11 opaque, densely and very finely punctate. Anterior tibiæ with a single spur. Anterior tarsi with the basal joint scarcely dilated, concave and almost smooth beneath, fully as long as the second. Sixth ventral segment triangularly emarginate.

♀. Antennæ with the basal joint only a little longer than the second, the latter not quite the length of the third.

Length 9–17, breadth $2\frac{1}{4}$–$4\frac{1}{3}$ millim. (♂ ♀.)

Hab. Mexico, Iguala in Guerrero, Jalapa (*Höge*), Orizaba (*Sallé*); Nicaragua, Chontales (*Belt, Janson*).

A pair from Nicaragua and three females from Mexico. In the greatly distorted basal joint of the male antenna this species approaches *M. fumosa*, from which it may easily be distinguished by its more elongate shape, fine pubescence, and different colour, and also by the single spur to the anterior tibiæ and the concave basal joint of the anterior tarsi in the male. *M. forticornis* (Haag) is a similarly coloured allied form; but, to judge from the description, it has a much less angularly dilated basal joint—"etwas gebogen, breit, flachgedrückt"—to the male antenna.

3. **Macrobasis albida.**

Lytta albida, Say, Journ. Acad. Phil. iii. p. 305 (1823)[1]; Amer. Ent. 2nd edit. i. t. 3 (1824)[2]; Complete Writings, i. p. 6, and ii. p. 170[3].

Macrobasis albida, Horn, Proc. Am. Phil. Soc. xiii. p. 89[4]; Dugès, An. Mus. Michoacano, ii. p. 57[5].

Lytta luteicornis, Lec. Proc. Acad. Phil. vii. p. 84[6].

Hab. North America[1 2 3], Texas[4], Laredo[6].—Mexico (*coll. F. Bates*), Huasteca Potosina (*Dugès*[5]), Orizaba (*Sallé*). see m. Berlese p. 402

A large species, thickly clothed with fine cinereous or fulvo-cinereous pubescence, the prothorax usually with a fine blackish streak on either side of the middle of the disc. The basal joints of the antennæ are rufo-testaceous; the first joint in the male is curved, as long as the next four united, and deeply emarginate on the inner side before the apex. The anterior tibiæ have two spurs, and the first joint of the anterior tarsi is very much longer than the second, and undilated, in the male. Abundant in Texas.

4. **Macrobasis longicollis.**

Lytta longicollis, Lec. Proc. Acad. Phil. vi. p. 343[1].

Macrobasis longicollis, Horn, Proc. Am. Phil. Soc. xiii. p. 90[2]; Trans. Am. Ent. Soc. xii. p. 110[3].

Lytta sublineata, Lec. Proc. Acad. Phil. vi. p. 447[4].

Macrobasis sublineata, Horn, Proc. Am. Phil. Soc. xiii. p. 94[5]; Trans. Am. Ent. Soc. xii. p. 109[6].

Hab. North America[1], Texas[2 4 5], Arizona[2], and New Mexico[2].—Mexico, Northern Sonora (*Morrison*).

Three male examples of this species were sent us by the late Mr. Morrison as from Sonora. It differs from *M. albida* in having the basal joint of the antennæ very feebly sinuate on the inner side before the apex, and in having only one spur to the anterior tibiæ, in the male sex.

5. **Macrobasis purpurea.** (Tab. XVIII. figg. 17, ♂; 17 *a*, antenna, ♂.)

Macrobasis purpurea, Horn, Trans. Am. Ent. Soc. xii. pp. 108, 110[1].

Moderately elongate, pitchy-black, finely and rather sparsely pubescent; the head with the sides, the anterior portion, a median stripe, and the occiput, the prothorax with the sides, a rather broad median stripe, the apex narrowly, and the basal margin, the scutellum, the elytra with the suture, apex, and lateral margin very narrowly, and a rather wider stripe on the outer portion of the disc extending from the base nearly to the apex, cinereo-pubescent, the rest of the pubescence purplish-black; beneath uniformly cinereo-pubescent. Head large, with a small flavous oblong spot between the eyes, closely and finely punctured, with a fine median groove, the epistoma sharply separated from the front; palpi and antennæ brownish, the latter very long, setaceous, and moderately slender; prothorax narrower than the head, not so long as broad, rounded at the sides anteriorly, and slightly sinuous before the base, the disc with a fine, smooth, well-marked median groove, which, towards the apex, becomes shallower and wider, the surface closely and finely punctured; elytra moderately elongate, not much wider than the head; beneath very closely punctured; legs obscure brownish.

♂. Antennæ with the basal joint nearly as long as joints 2–5 united, slightly flattened, becoming stouter outwardly, sinuous in its apical half, and excavate on the inner side beyond the middle, somewhat thickly punctured; joint 2 concave beneath, not quite twice the length of, and only a little stouter than, 3; joints 3–11 slender, becoming gradually longer and thinner, 3 distinctly shorter than 4, 5–10 subequal in length. Anterior tibiæ with a single spur. Anterior tarsi with the basal joint scarcely dilated, concave beneath, as long as the second. Sixth ventral segment feebly emarginate.

Length $12\frac{1}{2}$, breadth $3\frac{1}{2}$ millim. (♂.)

Hab. North America, Arizona [1].—Mexico, Ventanas in Durango (*Höge*).

Dr. Horn's description [1], taken from a single male, from Arizona, nearly agrees with a specimen of the same sex from Durango. The Durango male has the basal joint of the antennæ sinuous in its apical half, and excavate on the inner side beyond the middle: the Arizona male is described [1] as having "the basal joint arcuate, gradually wider from base, not contorted at apex." As there are some other slight discrepancies, I have thought it advisable to give a description of the Durango insect.

6. **Macrobasis disparilis.** (Tab. XVIII. figg. 18, ♂; 18 *a*, antenna, ♂.)

Elongate, narrow, parallel, black; the head, the flanks, the basal and apical margins, and sometimes a line on the middle of the disc of the prothorax, the scutellum, the suture, the apical and lateral margins of the elytra very narrowly, and a small spot at the middle of the base of each, the under surface, and legs, cinereo-pubescent, the rest of the pubescence black or blackish-brown, sparse, and fine. Head moderately large, closely and finely punctured, finely canaliculate in the middle, the epistoma separated from the front by a deep groove; antennæ slender, setaceous, black; prothorax narrower than the head, about as long as broad, the sides rounded anteriorly, parallel behind, and slightly widened at the base, the disc triangularly depressed in the middle behind and with a well-marked median groove, the surface closely and finely punctured; elytra very long and parallel, wider than the head, sparsely, minutely punctate; beneath closely punctured; legs black.

♂. Antennæ with the basal joint exceedingly elongate, nearly reaching the base of the prothorax, and about equalling joints 3–9 united, flattened and moderately stout, gradually thickening outwardly, and abruptly sinuous in its apical third; the second joint equally stout, flattened-cylindrical, slightly curved, as long as joints 3–5 united, and not half the length of 1; joints 3–11 slender, moderately elongate, gradually becoming thinner outwardly, subequal in length; joints 1 and 2 very sparsely, the others densely punctured. Maxillary palpi flavous. Anterior tibiæ with a single spur, sinuous. Anterior tarsi with the first joint partly flavous, flattened and sinuous, much shorter than the second, above and beneath shining and almost glabrous, concave on the underside and at the base on the upperside. Sixth ventral segment feebly emarginate.

♀. Antennæ slender from the base; joint 1 not equalling 2 and 3 united, 2 one-half longer than 3, 3–11 formed as in the male. Maxillary palpi black. Anterior tarsi with the first joint normal, longer than the second.

Length 10–12, breadth $2\frac{1}{3}$–3 millim. (♂ ♀.)

Hab. Mexico (*Sallé, ex coll. Sturm*), Puebla (*Sallé*), Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Seven examples. In this species the basal joint of the male antenna is so much elongated that it nearly reaches the base of the thorax. *M. disparilis* is allied to *M. diversicornis* and *M. beckeri*. In the colour and arrangement of the pubescence it is extremely like *Epicauta cinctipennis*, Chevr., with which species it was confounded in the Sallé collection.

7. **Macrobasis forticornis.**

Lytta forticornis, Haag, Berl. ent. Zeitschr. 1880, p. 41[1].

Hab. Mexico (*mus. Helsingfors*[1]).

"Elongata, opaca, dilute brunnea, pube grisea vestita, sutura, margine lineaque angusta mediana albidis, humeris maculaque ad scutellum denudatis.—Long. 15, lat. 4½ millim.—♂ art. duabus primis antennarum valde elongatis, 1° curvato, dilatato, capite longiore, 2° primo breviore.—♀ latet."

We have not received an example of this species. It approaches *M. distorta* and *M. purpurea* in having a whitish-pubescent median line on each elytron, but differs from both in the form of the male antenna.

8. **Macrobasis diversicornis.** (Tab. XVIII. figg. 19, ♂; 19 *a*, antenna, ♂.)

Lytta diversicornis, Haag, Berl. ent. Zeitschr. 1880, p. 42[1].

? *Lytta pallida* (Chevr.), Haag, loc. cit.[2].

Lytta candèzi, Haag, loc. cit. p. 43[3].

Macrobasis flavens, Dugès, An. Mus. Michoacano, ii. p. 58 (1889)[4].

Hab. Mexico[2], Chihuahua city, Villa Lerdo in Durango, Acapulco[4], Sayula in Jalisco, Jalapa (*Höge*), Chilpancingo in Guerrero (*H. H. Smith, Höge*), Ventanas in Durango (*Forrer*), Buliacan (*coll. Haag*[1]), Tuxtla, Tehuantepec (*Sallé*); Guatemala (*coll. Haag*[3], *Sallé, Conradt*), Guatemala city (*Rodriguez*), Chacoj (*Champion*); Costa Rica, Caché (*Rogers*).

This is the commonest species of *Macrobasis* within our limits, and ranges as far south as Costa Rica. It was found in numbers by Herr Höge at Chilpancingo. An elongate, narrow species, varying greatly in the colour of the pubescence—from cinereous to yellowish—and in the colour of the elytra—from piceous to testaceous. The tarsi are piceous or black, the femora and tibiæ usually in great part testaceous. The male has the basal joint of the antennæ broadly flattened and slightly curved, unemarginate on the inner side before the apex, and as long as joints 2–6 united, its upper face sometimes grooved along the middle; the second joint flattened-cylindrical, narrower, nearly one-third the length of the first and a little longer than the next two joints together; joints 3–11 slender, 3 a little shorter than 4; joints 1 and 2 are subglabrous, and almost smooth, the following ones densely rugose and pubescent. The anterior tibiæ in this sex have a single spur, and the basal joint of the anterior tarsi is flattened and sinuous, and almost smooth. The basal joint of the male antenna varies in width, it being considerably wider in some specimens than in others; in those in which it is widest (particularly in two from Guatemala) the median groove is well defined. *M. candezi* is a dark form, and *M. pallida* probably a light one, of *M. diversicornis*. *M. linearis,* Lec., from Texas, is an allied species; it differs from *M. diversicornis* in the relative length of the basal joints of the male antenna.

9. **Macrobasis beckeri.** (Tab. XVIII. figg. 20, ♂; 20 *a*, antenna, ♂.)

Macrobasis bekeri (sic), Dugès, An. Mus. Michoacano, ii. p. 113 bis [1].

Hab. Mexico, Canelas in Durango (*Becker* [1]).

Found in numbers by Mr. Becker. Specimens of both sexes are before me. *M. beckeri* agrees with *M. diversicornis* in the form of the antennæ and anterior tarsi in the male; but differs from that species in the finer, darker, and sparser pubescence of the upper surface. The sides and front of the head, the occiput, and the sides, base, and apex of the thorax, and the suture very narrowly, are cinereo-pubescent, the rest of the pubescence being brown. All our specimens are more or less abraded and discoloured.

10. **Macrobasis humeralis.**

Macrobasis humeralis, Dugès, An. Mus. Michoacano, ii. p. 58 [1].

Hab. Mexico, Tepic (*Flohr* [1]).

We have apparently not received an example of this species, both sexes of which are described by Dugès. "The antennæ of the male are filiform, their first joint longer than the head, and equal to joints 2–4 united, the second joint longer than the third, and about one half as long as the first, joints 3–10 subequal, 1 and 2 shining. The head and thorax are black, the elytra ferruginous. The pubescence is greyish-yellow; the elytra with a spot on either side of the scutellum and a streak on the humeral callus blackish-pubescent." The form of the anterior tarsi of the male is not mentioned.

11. **Macrobasis tenuicornis.** (Tab. XVIII. figg. 21, ♂; 21 *a*, antenna, ♂.)

Elongate, black, above and beneath rather densely cinereo-pubescent, the elytra with a small spot at the base on either side of the scutellum and a small patch on the humeri blackish- or brown-pubescent; the legs cinereo-pubescent, the tarsi in great part and the tips of the femora and tibiæ brown-pubescent. Head moderately large, very closely and finely punctured, with a fine median line, the latter ferruginous anteriorly, the palpi pitchy-brown; antennæ black, very slender, setaceous, the basal joints very little thickened in the male; prothorax nearly as wide as the head, as long as broad, rounded at the sides anteriorly, parallel behind, closely and finely punctured, and with a fine median line; elytra elongate, much wider than the prothorax.

♂. Antennæ with the first joint long and slender, extending to the base of the head, and about as long as joints 2–4 united, not sinuate or emarginate on the inner side before the tip; joint 2 very little stouter than 3, and fully one-half longer than it; joints 3–11 elongate, subequal in length; joints 1 and 2 thickly, the others densely, punctured. Anterior tibiæ with a single spur. Anterior tarsi with the first joint slightly longer than the second, not dilated, concave and smooth at the base beneath. Sixth ventral segment feebly emarginate.

Length $12\frac{1}{2}$–$14\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Chilpancingo (*H. H. Smith*).

Two males—one from Chilpancingo, the other from an unknown locality; the latter is contained in Mr. F. Bates's collection. This species differs from its allies in the very long and slender basal joint of the male antenna, this joint being unemarginate on

the inner side before the tip; the second joint is quite slender, and one-half longer than the third. *M. tenuicornis* approaches *M. tenuis* and *M. diversicornis*, but differs from both in the form of the male antenna. *M. unicolor* (Kirby) has two spurs to the male anterior tibia, and *M. immaculata* (Say) a very much shorter basal joint to the male antenna. *M. tenuicornis* agrees very nearly in its male characters with *M. humeralis*, Dugès; but there are considerable discrepancies in colour and other particulars, and it cannot be satisfactorily identified with that species.

12. **Macrobasis ochrea.** (Tab. XVIII. figg. 23, ♂; 23 *a*, antenna, ♂.)

Lytta ochrea, Lec. Proc. Acad. Phil. vi. p. 342 (1853)[1].
Macrobasis ochrea, Horn, Proc. Am. Phil. Soc. xiii. p. 91 (1873)[2]; Trans. Am. Ent. Soc. xii. p. 110[3].
Cantharis protarsalis, Dugès, La Naturaleza, iv. p. 63, t. 2. figg. 7, 7 *a–h* (♂), 8 *a–c* (♀)[4].
Macrobasis protarsalis, Dugès, An. Mus. Michoacano, ii. p. 53[5].

Hab. North America, Texas[1 2].—Mexico, Northern Sonora (*Morrison*), Guanajuato (*Santander*[4 5]).

We have received numerous examples of both sexes of this species from Sonora. Leconte's description[1] (and apparently Dr. Horn's also[2]) was made from a single male example of unusually large size and somewhat pallid colour. Dugès describes and figures both sexes[4], from specimens found in a house at Guanajuato. *M. ochrea* differs from all its allies in the short antennæ, joints 2–11 being obconic, and 2 a little shorter than 3. In the male the basal joint of the antennæ is nearly one-third of their entire length, the first joint of the anterior tarsi is broad, concave above, very much shorter than the second, and obliquely produced within, and the last ventral segment is emarginate. The elytra are uniformly testaceous; the head and thorax vary in colour from piceous to testaceous. This species might equally well be placed in *Epicauta*, the second antennal joint being slightly shorter than the third in both sexes.

13. **Macrobasis segmentata.** (Tab. XVIII. figg. 22, ♂; 22 *a*, antenna.)

Lytta segmenta, Say, Journ. Acad. Phil. iii. p. 303 (1824)[1]; Complete Writings, ii. p. 169[2].
Lytta segmentata, Lec. Proc. Acad. Phil. vi. p. 342 (1853)[3].
Macrobasis segmentata, Horn, Proc. Am. Phil. Soc. xiii. p. 93[4]; Trans. Am. Ent. Soc. xii. p. 110[5].
Lytta valida, Lec. Journ. Acad. Phil. iv. p. 39 (1858)[6].
Macrobasis cinctothorax, Dugès, An. Mus. Michoacano, ii. p. 56[7].

Hab. North America[1 3], Kansas[4] to Texas[3 4 6] and Arizona[4].—Mexico, Santa Clara in Chihuahua, Villa Lerdo in Durango (*Höge*), Chihuahua (*Höge*[7]).

Dr. Horn remarks[4] that the wings in this species are usually very small and rudimentary, and that specimens occasionally occur in which they are fully developed. The six examples, including both sexes, received by us from Mexico all have fully-developed wings. A large black species, the thorax with a fringe of cinereous hair along the base and apex, the rest of the pubescence of the upper surface (and that

of the under surface also in great part) black. The basal joint of the antennæ is very similarly formed in both sexes, and about as long as the following two joints united, the second joint being a little shorter than the third; the anterior tibiæ have two spurs in the male.

14. **Macrobasis megacephala.** (Tab. XVIII. figg. 24, ♂; 24 *a*, antenna, ♂.)

Elongate, black, finely and rather densely pubescent; the pubescence on the head, the scutellum, and the apical margin of the elytra cinereous, that on the rest of the elytra blackish-brown; the prothorax cinereo-pubescent, with a large oblong patch on either side of the middle of the disc brown-pubescent; the pubescence on the under surface cinereous, the ventral segments each with a transverse band in the middle extending completely across blackish-pubescent. Head very large and convex, densely and finely punctured, with a fine, smooth median line, which anteriorly is of a ferruginous colour, the anterior part of the epistoma and the palpi flavous, the labrum deeply emarginate; antennæ black or piceous, brownish towards the base, slender, setaceous; prothorax much narrower than the head, as long as broad, the sides converging and rounded anteriorly and parallel behind, the disc triangularly depressed in the middle before the base, and with a faint median line, the surface very closely punctured; elytra only a little broader than the head, elongate, closely and shallowly punctured.

♂. Antennæ with the basal joint slender, thickening a little outwardly, twice as long as the second, unemarginate on the inner side before the apex; the second joint shorter than the third, equal to the fourth; joints 5–11 equal in length. Anterior tibiæ with two spurs. Anterior tarsi with the basal joint normal, elongate, nearly as long as joints 2 and 3 united. Sixth ventral segment subtruncate.

Length 19½–21 millim. (♂.)

Hab. Mexico, Monclova in Coahuila (*Dr. Palmer*).

Two male examples, both worn. Closely allied to, and perhaps an extreme form of, *M. segmentata*, from which it may be known by the larger and more convex head, and the different colour of the pubescence of the head, thorax, and under surface. The antennæ are more slender in the male, but otherwise they are formed as in *M. segmentata*.

The following species is placed by Dugès in *Epicauta*, but it belongs to *Macrobasis*, the second joint of the antennæ (♂) being comparatively elongate and as long as the third. The insect was omitted from the table of species of *Macrobasis*, anteà, p. 395.

15. **Macrobasis basalis.**

Cantharis basalis, Dugès, La Naturaleza, v. p. 144, t. 4. figg. 7, 7 *a–d*[1].

Epicauta basalis, Dugès, An. Mus. Michoacano, ii. p. 71[2].

Hab. Mexico (*coll. F. Bates*), State of Vera Cruz [1] [2], Orizaba (*Sallé*).

The female of this insect is so like the same sex of *M. albida* that I incorrectly identified two specimens of it with that species, *anteà*, p. 397; the locality "Orizaba" must therefore be erased and transferred to *M. basalis*. The male, of which I have since detected an example in Mr. F. Bates's collection, has the basal joint of the antennæ flattened and curved, and nearly as long as 2 and 3 united, the latter subequal, these organs being entirely black (in *M. albida* the basal joints are usually

rufo-testaceous); in the female the basal joint is shorter and less dilated, and the third is a little longer than the second or fourth. The anterior tibiæ have two spurs in the male. *M. basalis* approaches *M. segmentata* in the structure of the antennæ; it very closely resembles the cinereous variety of *Epicauta cinerea*, but may be known at once from that insect by the third joint of the antennæ being much less elongate, not or very little longer than the second.

GNATHOSPASTA.

Gnathospasta, Horn, Trans. Am. Ent. Soc. v. p. 154, fig. (mouth-parts) (1875).

This genus is closely allied to *Epicauta* and *Macrobasis*, but differs from both in the very deeply emarginate labrum, and in the largely-developed, prominent, pincer-like, unemarginate mandibles. A single species, *G. mimetica*, from Texas, is included in it by Dr. Horn. *Cantharis* (*Macrobasis*) *labialis*, Dugès *, is a true *Gnathospasta*, and apparently only differs from *G. mimetica* by its black (not cinereous) pubescence. The anterior tibiæ of *G. labialis* have two spurs in both sexes—the inner one slender, acute, and curved, the outer one very long and stout, concave, and truncate at the tip,—a character not mentioned by Dr. Horn or Dugès. The basal joint of the antennæ in the male, as in various *Macrobases*, is flattened and elongated, and sinuate on the outer side towards the tip.

1. Gnathospasta labialis.

Cantharis labialis, Dugès, La Naturaleza, v. p. 145, t. 4. figg. 9, 9 *a–d* (mouth-parts and antennæ) (1881)[1].

Macrobasis labialis, Dugès, An. Mus. Michoacano, ii. p. 51[2].

Hab. Mexico, Pénjamo in Guanajuato (*Dugès* [1 2]).

Described from abraded examples, which were found mixed with a large quantity of *Cantharinæ* collected at Pénjamo for medicinal purposes. The antennæ of the male are described and figured as having their first joint about three times as long as the second, curved, and emarginate internally beyond the middle (so that the interior edge appears to be angularly dilated), the second joint cylindrical, and the third one half the length of the first.

The head is very large in both sexes. It is not unlikely that *G. labialis* will prove to be inseparable from *G. mimetica*, Horn. Of *G. labialis* we have received two males and one female; a single example only (♂) of *G. mimetica* served Dr. Horn for his description.

* In rejecting this species from *Macrobasis*, anteà, p. 395, I have incorrectly stated that it belongs to *Epicauta*.

EPICAUTA.

Epicauta, Redtenbacher, Fauna Austriaca, ed. 1, p. 631 (1849); Horn, Proc. Am. Phil. Soc. xiii. p. 95 (1873); Leconte & Horn, Class. Col. N. Am. p. 421 (1883).

The highlands of Mexico and the adjacent regions to the northward are particularly rich in species of this genus, and the headquarters of *Epicauta* in the New World would appear to be in Mexico, its members rapidly diminishing in number southwards. Forty-nine species * (as against thirty-five from the United States) are here enumerated from Mexico or Central America: of this number seven only extend to Guatemala or Nicaragua, and one (*E. carmelita*) to Colombia. Panama appears to have but three species, two of which are South American. The Mexican *Epicautæ* have been monographed by Dugès [An. Mus. Michoacano, ii. pp. 60–91 (1889)], and many species have also been described by Haag, these authors having in numerous cases described the same species under different names; thirty-two are enumerated by Dugès. As in *Macrobasis*, the male-characters in the antennæ, anterior tibiæ, &c. are of the utmost importance for discriminating between the numerous closely-allied forms, more particularly as regards the species with cinereous or black pubescence, the colour of the pubescence itself being sometimes variable (*E. cinerea*, &c.). The punctuation of the head and thorax also varies greatly in some of the species (*e. g.* in *E. curvicornis*), and it cannot always be relied upon as a specific character. In one interesting new species from Coahuila (*E. singularis*) the suture of the elytra is longitudinally raised at about one-third from the apex in the female. The antennæ, the intermediate joints of which are sometimes distorted (*E. curvicornis*) or dilated (*E. basimacula*, &c.) in the male, show every gradation in structure from strongly setaceous to filiform; but in the following "Key" I have not thought it safe to group the species upon this character (as is done by Dr. Horn), as some of them would be as well placed in one section as the other. All the species here referred to *Epicauta* have a silky-pubescent concave space on the inner face of the anterior femora and tibiæ in both sexes. *E. subatra*, *E. apicalis*, and *E. subrubra*, Dugès, and *E. dohrni*, *E. haroldi*, and *E. modesta* (Haag) are unknown to me, and may be incorrectly placed in the "Key." These insects are chiefly found in the dry-season, upon flowers, sometimes in the greatest profusion.

Third antennal joint distinctly longer than the fourth.
  Prothorax with the sides more or less rounded or obliquely converging in front.
    Antennæ elongate, setaceous, the intermediate joints strongly distorted in male . . . . . Species 1.
    Antennæ more or less elongate, tapering outwardly or filiform.
      Anterior tibiæ unicalcarate in male.
        Intermediate joints of the antennæ flattened and dilated in male . Species 2–4.

* Three or four of these must be regarded as doubtful.

Intermediate joints of the antennæ not or scarcely dilated in male.
- Elytra entirely luteous . . . . . Species 5.
- Elytra luteous or yellow, with large apical black patch . . . . Species 6, 7.
- Elytra reddish-brown, with two spots at the base and another before the apex blackish-brown . . . . . Species 8.
- Elytra black, with a broad transverse vitta and an apical spot yellowish-pubescent . . . . . Species 9.
- Elytra cinereo-pubescent, each with a very large anteapical black spot . . . . . Species 10.
- Elytra cinereo-pubescent, each with a very small anteapical black spot . . . . . Species 11.
- Elytra black-pubescent (in *E. cinereiventris*, var., with cinereous apical patch) . . . . . Species 12, 13.
- Elytra with black and cinereous pubescence . . . . . Species 14.
- Elytra cinereo-pubescent . . . . . Species 15, 16.
- Elytra (and head and prothorax) cinereo-pubescent, with denuded black spots or markings . . . . . Species 17–19.

Anterior tibiæ bicalcarate in male.
- Vertex more or less convex.
  - Elytra longitudinally striped with black and yellow . . . . . Species 20–23.
  - Elytra (ground-colour) black, with yellowish, cinereous, or white vittæ . . . . . Species 24, 25.
  - Elytra luteous or brownish . . . . . Species 26.
  - Elytra purplish or black; the pubescence of the body above and beneath black or blackish-brown . . . . . Species 27–32.
  - Elytra black, with the sutural and lateral margins cinereo- or yellowish-pubescent . . . . . Species 33, 34.
  - Elytra black, their margins and the apex of each ventral segment whitish-pubescent . . . . . Species 35.
  - Elytra cinereo-pubescent, the base and apex rather broadly black . Species 36.
  - Elytra with cinereous, yellowish, or black pubescence (in *E. cinerea*, var., black, with sutural and lateral margins cinereous).
    - Legs black . . . . . Species 37–42.
    - Legs flavo-testaceous . . . . . Species 43.
  - Vertex thin . . . . . Species 44.

Antennæ shorter, the joints cylindrical and more closely articulated; anterior tibiæ bicalcarate in male; species black, with cinereous, yellowish, or fulvous pubescence.
- Labrum feebly emarginate . . . . . Species 45, 46.
- Labrum very deeply semicircularly emarginate . . . . . Species 47.

Prothorax as wide in front as at the base, the anterior angles prominent . Species 48.

Third and fourth antennal joints subequal in length . . . . . Species 49.

1. **Epicauta curvicornis.** (Tab. XVIII. figg. 25, ♂, var.; 25 *a*, antenna, ♂.)

Cantharis obesa, Herrera y Mendoza, Gaceta méd. de Méx. ii. no. 17[1]; Dugès, La Naturaleza, i. p. 128 (pars) (nec Chevr.)[2].

Lytta curvicornis, Haag, Berl. ent. Zeitschr. 1880, p. 43[3].

Lytta fauresi (Bouc.), Haag, loc. cit. p. 44[4].

Macrobasis antennalis, Dugès, La Naturaleza, v. p. 148, t. 4. figg. 13, 13 *a–f* (sine descr.) (1881)[5]; An. Mus. Michoacano, ii. p. 54 (1889) (nec Mars.)[6].

? *Epicauta nodicornis* (Klug), Dej. Cat. 3rd edit. p. 248[7].

Hab. Mexico [1 2 7], Mirador (*mus. Helsingfors* [3]), Vera Cruz (*Dugés* [6]), Parada, Durasnal, Matamoros Izucar, Orizaba (*Sallé*), Oaxaca (*coll. F. Bates* [3], *Sallé*, *Höge*), Jalapa (*Höge*), Chilpancingo and Amula in Guerrero (*H. H. Smith*).

Not uncommon in Mexico. There are two well-marked forms of this remarkable species: one (as described by Haag [3] and Dugès [6]) with the head and thorax sparsely, coarsely, irregularly punctured, the pubescence of the upper surface sparse and black, the sutural and lateral margins of the elytra cinereous; the other with the head and thorax closely, finely punctate, and the pubescence denser and uniformly cinereous, or (two examples from Amula) purplish-red. The sexual characters are precisely similar in both forms. In the male the antennal joints 1–6 are shining and almost smooth, 7–11 densely punctured and opaque; 1, 3, 4, and 5 are exceedingly stout, 2 very short; 6 is strongly and obliquely produced on the inner side, and 7 is articulated to it at the middle of the outer side, instead of at the apex. In the female the antennæ are subfiliform, joints 4–6 being subequal and much shorter than 3 or 7, 7–11 elongate and gradually increasing in length. The basal joint of the anterior tarsi is feebly dilated, and the anterior tibiæ are bicalcarate, in the male. The spurs of the hind tibiæ are long and subequal. All the numerous Oaxaca examples but one belong to the dark form, those from Guerrero to the light one; intermediate forms occur at Parada, Orizaba, and Oaxaca.

2. **Epicauta basimacula.** (Tab. XIX. figg. 1, ♂; 1 *a*, antenna, ♂.)

Lytta basimacula, Haag, Berl. ent. Zeitschr. 1880, p. 48[1].

Cantharis rufescens, Dugès, La Naturaleza, v. p. 142, t. 4. figg. 4, 4 *a–c* (1881)[2].

Epicauta rufescens, Dugès, An. Mus. Michoacano, ii. p. 75[3].

Hab. Mexico [1], Cotija in Michoacan (*Dugès* [2 3]), Iguala in Guerrero (*Höge* [2]), Tehuantepec (*Sallé*).

Found in plenty by Herr Höge at Iguala. The elytra have a transverse patch on either side of the scutellum at the base and a short streak on the shoulder black; the apices are luteous or fulvous. The pubescence on the head, thorax, and scutellum is cinereous- or brownish-cinereous, that on the elytra brown or blackish-brown; the basal margin of the thorax and the sutural and lateral margins of the elytra are whitish-

pubescent. The outer spur of the hind tibiæ is broader and stouter than the inner one. The male has the joints 3–6 of the antennæ flattened and considerably dilated, and a single spur to the anterior tibiæ. There can be little doubt that the insects described by Haag [1] and Dugès [2] belong to one and the same species, notwithstanding certain discrepancies in the description: Dugès omits to mention the basal spots of the elytra, and Haag the fulvous apex. It is probable that they only had discoloured or worn specimens before them. A male from Iguala is figured.

3. **Epicauta rufipedes.** (Tab. XIX. figg. 2, ♂; 3, var. *cinctella*, ♀.)

Cantharis rufipedes, Dugès, La Naturaleza, i. p. 163, t. 2. figg. 4, *c* 1–3 (1869) [1].
Epicauta rufipedes, Dugès, An. Mus. Michoacano, ii. p. 64 [2].
Cantharis cinctella, Dugès, La Naturaleza, iv. p. 59, t. 3. figg. 3, 3 *a–f* (1877) [3].
Epicauta cinctella, Dugès, An. Mus. Michoacano, ii. p. 64 [4].
Lytta subvittata, Haag, Berl. ent. Zeitschr. 1880, p. 47 (nec Erichs.) [5].
Epicauta vittula (Baulny), Beaureg. Bull. Soc. Ent. Fr. 1889, p. ccxiii [6].

Hab. Mexico [5], Ventanas in Durango (*Forrer*), Michoacan (*Dugès* [1 2]), Tonila in Colima, Huetamo in Michoacan, Atlixco in Puebla, Iguala and Acapulco in Guerrero, Sayula in Jalisco, Jalapa, Tapachula in Chiapas (*Höge*), Chilpancingo in Guerrero (*Höge*, *H. H. Smith*), Amula, Rincon and Dos Arroyos in Guerrero (*H. H. Smith*), Bobo (*Flohr* [4]), Cuernavaca (*Höge*, *Sallé*), Puebla, Matamoros Izucar, State of Vera Cruz [3 4], San Andres Tuxtla, Tehuantepec (*Sallé*), Mochitlan in Guerrero (*Baron*), Oaxaca (*Flohr* [2], *Höge*, *Sallé*), Temax in North Yucatan (*Gaumer*); Guatemala, San Gerónimo (*Champion*); Nicaragua, Chontales (*Janson*).

This is the commonest species of the genus in Mexico, and we have received hundreds of specimens of it. Two forms occur:—one with the apices of the elytra, and sometimes the humeri and sides also, luteous, and the suture, lateral margin, and a median line on the disc clothed with lighter pubescence than the rest of the surface (*E. rufipedes*, Dug., = *subvittata*, Haag); the other with an elongate-triangular scutellum patch, and the suture, apex, and lateral margin of the elytra, to a variable extent, luteous or ferruginous, and the median line of lighter pubescence partially or entirely obsolete (*E. cinctella*, Dug.). The Yucatan and Guatemalan specimens are intermediate, and might equally well be placed with either. Both forms were found in plenty at Oaxaca. In many undoubted examples of *E. rufipedes* the median line of lighter pubescence is more or less evanescent, or even obsolete, so that but little value can be placed on it as a specific character. In the male of this species the third and following joints of the antennæ are flattened and strongly compressed—3 elongate-triangular, three times as long as, and twice the width of, 2, 4–10 subequal in length, but diminishing in width, 4 and 5 as wide as, but much shorter than, 3; the anterior tibiæ with a single spur. The legs are reddish-testaceous, with the tarsi infuscate or black. The antennæ are

long and setaceous, black, the intermediate joints much narrower in the female than in the male.

In two examples (♀)—one from Tapachula, the other from Chontales—the elytra are fuscous, with the median vitta unusually well defined, the reverse being the case in all those from Guatemala and Yucatan.

Specimens of *Lytta subvittata*, determined by Haag himself, are before me; they differ in nothing from *E. rufipedes*, Dugès.

4. **Epicauta cupreola.**

Cantharis cupreola, Dugès, La Naturaleza, i. p. 112, t. 2. figg. 6, *c* 1, 2 (1869)[1].
Epicauta cupreola, Dugès, An. Mus. Michoacano, ii. p. 62[2]; Horn, Trans. Am. Ent. Soc. xii. p. 107[3].

Hab. North America, Texas[3].—Mexico, Guanajuato (*Dugès*[1 2], *Sallé*).

In the Sallé collection there are ten specimens labelled as belonging to this species. If these are correctly named, *E. cupreola* is extremely close to *E. rufipedes*, and only differs from it in its darker body and legs, and in the elytra not having a median line of lighter pubescence on the disc. The pubescence is cinereous, with the sutural, apical, and lateral margins paler. The male has a single spur to the front tibiæ, and the antennæ formed as in *E. rufipedes*; but the apical joint of the maxillary palpi appears to be more dilated. Dr. Horn[3] states that *E. cupreola* is closely related to the uniformly cinereous variety of *E. cinerea*: the dilated, strongly compressed intermediate joints of the antennæ, and the single spur to the anterior tibiæ, in the male, sufficiently distinguish *E. cupreola* from *E. cinerea* in all its varieties. There are discrepancies between Dugès's descriptions[1 2], and the specific name is altogether misleading.

5. **Epicauta rufipennis.** (Tab. XIX. fig. 4, ♂.)

Cantharis (*Lytta*) *rufipennis*, Chevr. Col. Mex., Cent. i. fasc. iv. no. 58 (1834)[1]; Dugès, La Naturaleza, i. p. 127[2].
Epicauta rufipennis, Dugès, An. Mus. Michoacano, ii. p. 60[3].
Cantharis ochreaceipennis, Dugès, La Naturaleza, i. p. 164, t. 2. fig. 2 (1869)[4].
Cantharis (*Epicauta*) *ochreipennis* (Sturm), Dugès, La Naturaleza, iv. p. 57, t. 2. figg. 1, 1 *a–g*[5].
Epicauta ochreipennis, Sturm, Cat. p. 174[6].
Epicauta frontalis, Sturm, loc. cit.[7].
Epicauta luridipennis, Dej. Cat. 3rd edit. p. 247[8].

Hab. Mexico[6 7 8] (*Sallé*, *ex coll. Sturm*), Yolotepec, Tehuantepec (*Sallé*), Guanajuato (*Dugès*[3 4 5], *Sallé*), Oaxaca (*Höge*, *Sallé*), Jalapa, Mexico city (*Höge*), environs of Mexico (*Chevrolat*[1 2]), Omilteme, Chilpancingo, and Mescala, all in Guerrero (*H. H. Smith*), State of Vera Cruz (*Dugès*[3], *Sallé*[5]), Mineral de la Luz (*Dugès*[5]); Guatemala, Purula (*Champion*).

A common species in Mexico, extending southwards into Alta Vera Paz. *E. rufipennis* was described by Chevrolat from an abraded example, and the specific name is misleading, the elytra being testaceous or luteous, with yellowish pubescence. The pubescence on the head is in great part ochreous, that on the thorax and under surface cinereous. The last joint of the maxillary palpi is short and dilated, and the anterior tibiæ have a single spur, in the male.

6. **Epicauta terminata.** (Tab. XIX. fig. 5, ♂.)

Cantharis terminata (Sturm), Dugès, La Naturaleza, i. p. 157, t. 2. figg. 11, *b* 1–6[1].
Epicauta terminata, Dugès, An. Mus. Michoacano, ii. p. 78[2].
Pyrota terminata, Sturm, Cat. p. 174 (nec Lec.)[3].

Hab. Mexico[3] (*Sallé, ex coll. Sturm*), Mochitlan in Guerrero (*Baron*), Acaguizotla in Guerrero (*H. H. Smith*), Matamoros Izucar (*Sallé, Höge*), Puebla (*coll. F. Bates*), Guadalajara in Jalisco (*Höge*), Vera Cruz (*Boucard*[1 2]).

In this species the head, thorax, scutellum, and under surface are deep black; the elytra with a large apical patch, and usually the base very narrowly, black, and for the rest luteous or fulvous, with dense yellowish-cinereous or fulvous pubescence. The male has a single spur to the front tibiæ. The eyes are deeply emarginate. The following species, *E. apicalis*, Dugès, appears to be a closely-allied form.

7. **Epicauta apicalis.**

Epicauta apicalis, Dugès, An. Mus. Michoacano, ii. p. 90 (1889) (nec Haag)[1].

Hab. Mexico, Tepic (*Flohr*[1]).

Unknown to me. "Black, the ground-colour of the elytra yellow, with the sutural portion near the base somewhat ferruginous, and the apical sixth black; the pubescence in great part yellow. Antennæ black, filiform, joints 1 and 3 subequal, 3 very short, 4–10 each a little shorter than 3, 11 subcylindrical. Thorax campanuliform." *Lytta apicalis*, Haag (1880), is not an *Epicauta*, so Dugès's name will stand.

8. **Epicauta dohrni.**

Lytta dohrni, Haag, Berl. ent. Zeitschr. 1880, p. 45[1].

Hab. Panama (*colls. Dohrn, Haag*[1]).

"Elongata, rufo-brunnea, capite rufo, antennis, genubus tarsisque nigris; tota dense pube grisea brevissima tecta, maculis duabus thoracis, duabusque in elytro singulo ad basin unaque ante apicem nigro-brunneis; femoribus anticis intus tibiisque aureo-pilosis.—Long. 18–20, lat. 6 millim."

The elytral markings and colour are suggestive of *Pyrota*, but the species evidently belongs to *Epicauta*. We have not received an example of it.

9. **Epicauta haroldi.**

Lytta haroldi, Haag, Berl. ent. Zeitschr. 1880, p. 44[1].

Hab. Costa Rica (*Wagner, in mus. Berol.*[1]).

"Nigra, opaca, pubescens, thorace, scutello, vitta latissima transversa elytrorum macula apicali subtusque indumento ochraceo-griseo densissime tecta, segmentis medio denudatis.—Long. 17, lat. 6 millim."

Unknown to me. According to Haag, this species is allied to *E. terminata*, *E. luridipennis* (*rufipennis*), and *E. carmelita*.

10. **Epicauta funesta.** (Tab. XIX. fig. 6, ♂.)

Lytta (*Epicauta*) *funesta,* Chevr. Col. Mex., Cent. i. fasc. iii. no. 54 (1834)[1].
Cantharis funesta, Dugès, La Naturaleza, i. p. 126[2], and iv. p. 67, t. 2. figg. 5, 5 *a–e*[3].
Epicauta funesta, Dugès, An. Mus. Michoacano, ii. p. 65[4].

Hab. Mexico, Orizaba[1 2], El Camaron, Vera Cruz[4] (*Sallé*), Jalapa, Cordova (*Höge*), Almolonga (*Höge*, *Flohr*[3]).

Only recorded as yet from the Mexican States of Vera Cruz and Puebla. It has been captured in abundance at Cordova and Orizaba. The pubescence is dense, cinereous or yellowish; the elytra with a large transverse ante-apical patch, interrupted at the suture, and usually the base on either side of the scutellum, narrowly, black. The male has a single spur to the anterior tibiæ, and the basal joint of the anterior tarsi slightly dilated. The eyes are deeply emarginate.

11. **Epicauta punctum.** (Tab. XIX. fig. 7, ♂.)

Cantharis punctum (Deyr.), Dugès, La Naturaleza, i. p. 158, t. 2. fig. 9[1].
Epicauta punctum, Dugès, An. Mus. Michoacano, ii. p. 67[2].

Hab. Mexico (*Boucard*[1]), Ventanas in Durango (*Forrer*), Parada (*Sallé*), Matamoros Izucar (*Sallé*, *Höge*), Mochitlan in Guerrero (*Baron*), Guadalajara (*Höge*), Vera Cruz (*Dugès*[2]).

Not uncommon in the highlands of Mexico. The species is black, densely clothed with rather coarse cinereous pubescence, the elytra each with a small black spot on the middle of the disc towards the apex. The antennæ are moderately long, subfiliform, very little thinner towards the tip, and rather stout in both sexes, the third joint twice as long as the second. The male has the anterior tibiæ strongly sinuous within and furnished with a single spur. The spurs of the posterior tibiæ are acute, subequal. The eyes are deeply emarginate. The punctuation of the thorax is variable.

12. **Epicauta atripilis.**

Elongate, deep black, opaque, the pubescence above and beneath black and rather dense. Head densely and rather coarsely punctate, more finely so on the vertex, without median channel, a narrow longitudinal space in the middle between the eyes impunctate, rufous, the eyes large and deeply emarginate, the labrum shallowly emarginate; last joint of the maxillary palpi (♂) oblong-ovate, obliquely truncate at

the tip; antennæ (♂) long and setaceous, a little shorter in the female, joints 1 and 3 about equal in length, 2 very short, 3 nearly twice as long as 4, 4–10 equal in length, but diminishing in thickness, 11 longer than 10, pointed; prothorax longer than broad, subparallel behind, somewhat obliquely narrowed anteriorly, densely, moderately finely punctate, the punctuation becoming coarser towards the apex, the disc feebly transversely depressed before the middle, depressed in the centre before the base, and with a faint median line; elytra moderately elongate, widened a little posteriorly, densely, very finely punctate; beneath densely punctured; the spurs of the hind tibiæ stout; the anterior tibiæ with a single spur in the male.

Length 13–18 millim. (♂ ♀.)

Hab. Mexico, Cordova and Oaxaca (*Höge*).

Found in numbers by Herr Höge. Very close to *E. nigra*, with which I at first confounded it; but differing from that species in the coarser punctuation of the head and thorax, the latter more obliquely narrowed anteriorly, less depressed in the middle behind, and more obsoletely canaliculate, the antennæ stouter, the anterior tibiæ with a single spur in the male. The only North-American species nearly allied to *E. atripilis* are *E. funebris*, Horn, and *E. levettei*, Casey, but both these have two spurs to the anterior tibiæ in the male. *E. corvina* has a much less elongate thorax.

13. **Epicauta cinereiventris.** (Tab. XIX. fig. 8, ♂, var.)

Elongate, deep black, sparsely pubescent, the head and prothorax shining, the elytra opaque; the pubescence of the upper surface, the scutellum (and sometimes the basal margin of the prothorax) excepted, black, that of the under surface and of the femora to a greater or less extent (the apex of the latter excepted) cinereous or yellowish-cinereous. Head coarsely but not very densely punctate, with a smooth, narrow rufous space in the middle between the eyes; antennæ and palpi as in *E. atripilis*; prothorax as in *E. atripilis*, but more coarsely and less densely punctured, the punctures becoming still coarser anteriorly, those on the middle of the disc usually separated by irregular smooth spaces; the elytra as in *E. atripilis*; the anterior tibiæ with a single spur in the male.

Length 9–18½ millim. (♂ ♀.)

Hab. Mexico, Acaguizotla in Guerrero (*H. H. Smith*); Guatemala (*Sallé*), San Gerónimo (*Champion*), Chimaltenango (*Conradt*).

Var. The apices of the elytra towards the suture rather broadly, and the basal margin of the prothorax, very narrowly, cinereo-pubescent.

Hab. Mexico, Tehuantepec (*Sallé*).

Nine examples of the type, one only (a male) of the variety. At first sight, *E. cinereiventris* would appear to be only a variety of *E. atripilis* with the pubescence of the lower surface cinereous; the punctuation of the head and thorax, however, is much coarser and not so dense, the latter having smooth, irregular, small spaces on the disc, and the pubescence sparser. In the single (♀) example from Acaguizotla the under surface and the femora (except at the tip) are entirely cinereo-pubescent; in the other specimens the apical one or two segments are black, the sides of the metasternum and of the abdomen also marked with black. *E. melanota* (Mäkl.), from Colombia, is an allied form, but differs in its very densely and finely punctured thorax and slender antennæ.

14. **Epicauta evanescens.**

Moderately elongate, black or blackish-brown, the head and prothorax shining, the elytra opaque; finely, sparsely pubescent, the pubescence not hiding the sculpture, in great part cinereous, that on the elytra variable—black or purplish, or with intermixed cinereous hairs, the base, suture, and apex rather broadly, and in one specimen the sides also, indeterminately cinereous; the under surface very sparsely cinereo-pubescent. Head rather coarsely, closely punctate, with an indistinct median groove and the usual fulvous streak between the eyes, the latter large and somewhat prominent, the labrum rather deeply emarginate; last joint of the maxillary palpi (♂) elongate, obliquely truncate at the tip; antennæ black (obscure ferruginous in one specimen), subfiliform, becoming a little thinner towards the tip, moderately long, stout, joints 1 and 3 about equal in length, 2 short, 4–10 subequal, much shorter than 3, 11 a little longer than 10; prothorax campanulate, slightly dilated at the base, fully as long as broad, closely, rather coarsely punctate, with a smooth, well-marked median groove; elytra moderately long, subparallel, finely scabrous-punctate; legs stout, black or blackish-brown, the spurs of the hind tibiæ equal; anterior tibiæ with a single spur in the male.

Length 10½–14 millim. (♂ ♀.)

Hab. Guatemala, Champerico (*Champion*).

Two males and one female, from the vicinity of the Pacific coast. This obscure species is perhaps nearest allied to *E. unicalcarata*, from which it differs in the coarsely-punctured head. The filiform, shorter antennæ, the more campanulate thorax, the latter with sharply-defined median groove, and the less elongate shape distinguish *E. evanescens* from *E. cinereiventris*, which has a variety with the apex of the elytra cinereous. It is probable that the elytral pubescence may vary in colour to entirely cinereous; the three specimens obtained have it as described above.

15. **Epicauta horni.**

Cantharis cinerea, Dugès, La Naturaleza, i. p. 160, t. 2. figg. 5, *d* 1 (1869) (nec Forst.) [1].
Cantharis vicina, Dugès, La Naturaleza, v. p. 147, nota (1881) (nec Haag) [2].
Epicauta vicina, Dugès, An. Mus. Michoacano, ii. p. 70 [3].

Hab. Mexico, Guanajuato (*Dugès* [1], *Sallé*), Michoacan (*Dugès* [3]).

We have received one female and two male examples of this species. *E. horni* chiefly differs from its allies by the fine punctuation of the head and thorax. The antennæ are moderately long and filiform, not thinner towards the tip. The anterior tibiæ have a single spur in the male. The pubescence above and beneath is uniformly cinereous and rather dense. Dr. Horn (Trans. Am. Ent. Soc. xii. p. 107) remarks that "*E. vicina* belongs to the series with filiform antennæ, and is most closely related to *E. sericans*, Lec."; the antennæ, however, are much more elongate, the joints less closely articulated. *Lytta vicina*, Haag (1880), from Brazil, is an *Epicauta*, and Dugès's second name, *vicina*, as well as his first, *cinerea*, is preoccupied.

16. **Epicauta unicalcarata.**

Elongate, narrow, subparallel, black, opaque, above and beneath sparsely uniformly clothed with fine cinereous pubescence. Head finely, sparsely, shallowly punctate, with a faint median line and a longitudinal fulvous streak in the middle between the eyes, the latter large and deeply emarginate, the labrum feebly

so; maxillary palpi stout, black, the apical joint oblong-ovate, obliquely truncate at the tip; antennæ black, stout, filiform, the joints flattened-cylindrical and not tapering outwardly—1 and 3 about equal in length, 2 short, not half the length of 3, 4–10 subequal, much shorter than 3, 11 longer than 10; prothorax rather longer than broad, narrower than the head, campanulate, slightly dilated at the base, densely, rather coarsely punctate (the punctures here and there confluent and very much coarser than those on the head), and finely canaliculate; elytra elongate, broader than the prothorax, shallowly and thickly punctured; legs stout, comparatively short, the tarsi especially, the spurs of the hind tibiæ subequal; anterior tibiæ with a single spur in the male.

Length 10 millim. (♂.)

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

Though we have received but a single (♂) example of this species, it is advisable to name it. In having a single spur to the male anterior tibia and filiform antennæ, *E. unicalcarata* approaches *E. horni* (*vicina*, Dugès), from which its longer, more coarsely punctured, thorax, larger eyes, and stouter antennæ distinguish it at a glance. The pubescence is sparse, and does not hide the punctuation; the punctures on the head are fine and sparse, those on the thorax much coarser and more closely placed; the legs and antennæ are stout and comparatively short.

The dissimilar punctuation of the head and thorax (resembling that of the N.-American *E. trichrus*, Pall.), apart from other characters, will separate *E. unicalcarata* from *E. stigmata*, *E. cinerea*, &c.

17. **Epicauta maculata.**

Lytta maculata, Say, Journ. Acad. Phil. iii. p. 298 (1824) [1]; Amer. Ent. i. t. 3. fig. 3 [2]; Complete Writings, i. p. 6, t. 3. fig. 3 [3]; Lec. Proc. Acad. Phil. vi. p. 340 [4].

Epicauta maculata, Horn, Proc. Am. Phil. Soc. xiii. pp. 96, 100 [5].

Lytta conspersa, Lec. Proc. Acad. Phil. vi. p. 340 (nec Germ.) [6].

Cantharis punctuata, Dugès, La Naturaleza, i. p. 161, t. 2. figg. 1, *a* 1–7 [7].

Epicauta punctuata, Dugès, An. Mus. Michoacano, ii. p. 81 [8].

Epicauta media, Dugès, loc. cit. p. 82 [9].

Hab. North America [1 2 3], New Mexico northward to Dakota and thence westward to California and Oregon [5], Missouri [4 6].—Mexico (*Flohr* [9]), Queretaro (*Dr. Palmer*), Villa Lerdo in Durango, Yautepec in Morelos, Irapuato in Guanajuato, Mexico city, Tula in Hidalgo, Oaxaca (*Höge*), Guanajuato (*Dugès* [7], *Sallé*), Huasteca Potosina [8], Morelia and Quiroga in Michoacan [8] (*Dugès*); Guatemala, Quiche Mountains 9000 feet (*Champion*).

Apparently a common species in Mexico, whence we have received a large number of specimens from various widely-separated localities, and extending southwards to the Los Altos region of Guatemala. It varies in the number and size of the denuded spots on the upper surface. In the typical *E. maculata* (Say) (as in *E. ocellata*, Dugès) the elytral spots are numerous and comparatively large; in the var. *conspersa*, Lec. (= *punctuata*, Dugès), they are smaller and more scattered; and in the var. *media*, Dugès,

they are very small and few in number. Of upwards of fifty specimens before me thirteen belong to *E. maculata*, two (including the single example from Guatemala) to *E. media*, and the remainder to *E. conspersa*. *E. conspersa* (*punctuata*, Dugès) appears to have longer antennæ (in both sexes) than *E. maculata*, as stated by Leconte [4].

Allied forms, *E. nigropunctata* (Blanch.), *E. atomaria* (Germ.), &c., occur in South America.

18. **Epicauta ocellata.** (Tab. XIX. figg. 9, ♂; 9 *a*, maxillary palpus, ♂.)

Cantharis ocellata, Dugès, La Naturaleza, i. p. 160 (1869) [1].
Epicauta ocellata, Dugès, An. Mus. Michoacano, ii. p. 80 (1889) [2].

Hab. Mexico, Hacienda de la Noria in Michoacan (*Dugès* [1]), Michoacan (*Flohr* [2]), Puebla (*Sallé*), Matamoros Izucar (*Höge*).

This species is exceedingly close to the typical form of *E. maculata*, which also occurs in Mexico, and only separable therefrom by the elongate apical joint of the maxillary palpi in the male sex: this joint is more than twice as long as broad in the single male example before me (in *E. maculata*, ♂, it is shorter and wider, nearly as broad as long). Dr. Horn (Trans. Am. Ent. Soc. xii. p. 107) states that *E. ocellata* is a variety of *E. maculata*.

19. **Epicauta pardalis.** (Tab. XIX. fig. 10, ♂.)

Epicauta pardalis, Lec. New Sp. Col. p. 157 (1866) [1]; Horn, Proc. Am. Phil. Soc. xiii. pp. 96, 99 [2].

Hab. North America, New Mexico [1], Arizona [1 2].—Mexico, Northern Sonora (*Morrison*).

We have received numerous examples of this peculiar species as from Sonora.

20. **Epicauta vitticollis.** (Tab. XIX. fig. 11.)

Lytta vitticollis (Gory), Haag, Berl. ent. Zeitschr. 1880, p. 52 [1].
Epicauta canoi, Dugès, An. Mus. Michoacano, ii. p. 86 (1889) [2].
Lytta ruficrus, Chevr. in litt.
Lytta confluens, Deyr. in litt.

Hab. Mexico [1], Vera Cruz (*Flohr* [2]), Cosamaloapan in Vera Cruz (*Sallé*), Teapa in Tabasco (*Höge*, *H. H. Smith*), Frontera in Tabasco (*Höge*); British Honduras, Belize, R. Hondo (*Blancaneaux*); Guatemala [1], Yzabal (*Sallé*), Panzos (*Conradt*), Chiacam, Cubilguitz (*Champion*); Nicaragua, San Juan del Norte (*Haag* [1]).

Not uncommon on the Atlantic slope, extending from the Mexican State of Vera Cruz to Nicaragua. It was found in plenty by Mr. Smith at Teapa in Tabasco. Closely allied to *E. lemniscata*, but broader; the ground-colour of the head and thorax entirely or in great part black, the underside and the legs, the trochanters and the basal two-thirds of the femora excepted, also black. In most of the southern specimens

and in one from Frontera, Mexico, the two external black vittæ of the elytra are confluent, or, at most, separated by a fine line of light pubescence. The thorax is elongate, transversely depressed before the apex, and parallel at the sides behind. The anterior tibiæ have two spurs in the male. The labrum is rather deeply emarginate.

21. **Epicauta lemniscata.**

Lytta lemniscata, Fabr. Syst. Eleuth. ii. p. 79[1]; Lec. Proc. Acad. Phil. vi. p. 341[2].
Epicauta lemniscata, Horn, Proc. Am. Phil. Soc. xiii. pp. 96, 100[3].
Epicauta vittata, Dugès, An. Mus. Michoacano, ii. p. 87 (nec Fabr.)[4].
Epicauta dugesi, Beaureg. Bull. Soc. Ent. Fr. 1889, p. ccxiii[5].

Hab. North America[1], Southern States[2 3].—Mexico, Hacienda de Santa Clara, Huasteca Potosina (*Dugès*[4]).

Dugès[4] describes an *Epicauta* from the Sierra de San Luis Potosi, Mexico, under the name of *E. vittata* (Fabr.); but, from the description, I have no doubt that his insect is really referable to the closely-allied *E. lemniscata.* Both Leconte[2] and Horn[3] state that *E. lemniscata* replaces *E. vittata* in the Southern States. I have not seen a specimen of either from within our limits. According to Dr. Horn[3], *E. vittata* is abundant in early summer on potato and tomato-plants in the Middle States.

22. **Epicauta grammica.** (Tab. XIX. fig. 12.)

Cantharis grammica, Fisch. Tentam. Consp. Canth. p. 19 (1827)[1].

Hab. Nicaragua, Chontales (*Belt*); Costa Rica (*Van Patten*); Panama, Bugaba, Volcan de Chiriqui, San Feliz, Tolé (*Champion*).—Colombia; Venezuela; Brazil[1].

Not uncommon in Chiriqui. Allied to *E. vittata,* but smaller and narrower; the thorax black; the elytra with the shoulder, the lateral margin, a slender median vitta nearly or quite reaching the apex, and sometimes a narrower abbreviated vitta within the margin, luteous, the suture, at most, very narrowly luteous; the underside and legs black, the coxæ and the extreme base of the femora reddish-testaceous. The thorax is long and narrow, parallel at the sides behind. The eyes are very large and deeply emarginate; the spurs of the hind tibiæ are slender and subequal; and the anterior tibiæ are bicalcarate in the male. In *E. vittata* and *E. lemniscata* the suture is rather broadly luteous, the black stripe on either side of it does not extend so near to the base, and the humeri (as in *E. vitticollis*) are not entirely luteous.

23. **Epicauta unilineata.** (Tab. XIX. fig. 13.)

Elongate, opaque, very finely and closely punctured, finely pubescent; the head reddish-testaceous, with two spots of variable size on the vertex, the mouth-parts, and eyes black, the pubescence yellowish; the thorax black, with a median vitta and the sides yellowish-pubescent; the scutellum luteous; the elytra black, with the lateral margin, the apex, and a narrow median vitta—widening a little in front and

curving round towards the scutellum, but not extending to the humerus—flavo-luteous, the pubescence partaking of the ground-colour; beneath black, cinereo-pubescent; legs black, the coxæ, the basal third or more of the femora, and the claws reddish-testaceous. Head broad, with a well-marked median groove, the eyes moderately large and deeply emarginate, the labrum also deeply emarginate; antennæ setaceous, rather slender, black, the two basal joints sometimes paler, joint 3 a little longer than 1; prothorax longer than broad, very much narrower than the head, transversely depressed anteriorly, and with a median groove, the sides converging in front, subparallel behind; elytra wider than the head, moderately elongate; posterior tibial spurs subequal, slender; anterior tibiæ with two spurs in the male.
Length 9–12 millim. (♂ ♀.)

Hab. GUATEMALA, near the city 5000 feet (*Salvin*), San Gerónimo (*Champion*).

Closely allied to *E. grammica*, but with the discoidal luteous vitta of the elytra not extending to the shoulder and the apex rather broadly margined with yellow: in *E. grammica* the lateral and discoidal luteous stripes are rather broadly confluent at the base. Numerous examples.

24. **Epicauta niveolineata.** (Tab. XIX. figg. 14; 15, var.)

Lytta niveolineata, Haag, Berl. ent. Zeitschr. 1880, p. 46[1].
Epicauta tristis, Sturm, Cat. p. 175[2].

Hab. MEXICO[1 2] (*Sallé, ex coll. Sturm*), Acapulco (*Höge, H. H. Smith*), Acaguizotla, Tierra Colorada, and Hacienda de la Imagen, all in Guerrero (*H. H. Smith*), Jalapa (*Höge*).

This fine species appears to have been unknown to Dugès. The pubescence of the head and thorax is variable in colour: in one example, from Jalapa, the thorax is cinereo-pubescent, with a black stripe on either side of the disc, and the head is in part cinereous, this example nearly agreeing with the description[1]; in the eight others before me the head and thorax are black-pubescent. The light pubescence is very coarse, and may be white, cinereous, or golden; in some specimens the median vitta of the elytra is dilated posteriorly and nearly joins the sutural stripe. The ventral segments 1–3 or (rarely) 1–4 have each a broad belt of light pubescence at the apex. The anterior tibiæ have two spurs in the male. The antennæ are long and subfiliform, tapering towards the apex, the third joint very elongate. Haag has described (*op. cit.*) two different species under the name *Lytta niveolineata*—one from Mexico, the other from the Himalaya; the latter has been renamed *atkinsoni* by Beauregard.

25. **Epicauta albolineata.** (Tab. XIX. fig. 16, ♂.)

Epicauta albolineata, Sturm, Cat. p. 175 (1843) (sine descr.)[1]; Dugès, An. Mus. Michocano, ii. p. 84 (nec Péring.)[2].
Cantharis albolineata, Dugès, La Naturaleza, iv. p. 64, t. 2. figg. 9, 9 *a–g* (♀) (1877)[3].
Epicauta duplicata, Casey, Ann. N. York Acad. vi. p. 172 (Nov. 1891)[4].

Hab. NORTH AMERICA, Arizona[4].—MEXICO[1] (*Sallé, ex Sturm*), Tupataro[2], Guanajuato[2 3] (*Dugès*), Chilpancingo in Guerrero (*Höge, H. H. Smith*), Iguala in Guerrero,

San Juan del Rio, Cuernavaca, Matamoros Izucar (*Höge*), Mochitlan in Guerrero (*Baron*), Oaxaca (*coll. F. Bates*); British Honduras, R. Sarstoon (*Blancaneaux*); Guatemala (*Sallé*), Purula (*Champion*); Nicaragua, Chontales (*Belt*).

Found in plenty at Chilpancingo and Iguala by Herr Höge. The female only appears to have been known to Dugès. In the male joints 3–6 of the antennæ are flattened and almost smooth, 3 being very stout and about twice as long as 5; the anterior tibiæ are strongly compressed before the middle, widened towards the apex, their lower surface concave, smooth, and glabrous, and furnished with a dense brush of hairs at the base, the apex bicalcarate; the lower surface of the anterior femora is hollowed out towards the apex and glabrous; and the basal joint of the anterior tarsi is somewhat abruptly widened from the middle, and glabrous at the base beneath. In some specimens the inner discoidal stripe of the elytra is obsolete; the short, fine, submarginal line is rarely visible. The outer spur of the hind tibiæ is broad and compressed, rounded at the tip, the inner one slender and acute. *E. duplicata*, Casey, is, no doubt, based upon a small female example of this species.

26. **Epicauta carmelita.** (Tab. XIX. fig. 17.)

Epicauta carmelita (Chevr.), Dej. Cat. 3rd edit. p. 247[1]; Dugès, An. Mus. Michoacano, ii. p. 61[2]. *Lytta carmelita*, Haag, Berl. ent. Zeitschr. 1880, p. 46[3].

Hab. Mexico[3], Paso del Macho in Vera Cruz (*Flohr*[2], *Höge*), Palo Verde, Playa Vicente, Tehuantepec (*Sallé*); Nicaragua (*Sallé*), Chontales (*Belt*, *Janson*), San Lorenzo (*Janson*); Panama, near the city (*Conradt*).—Colombia[1 3] (*coll. F. Bates*).

Found in plenty by Herr Höge at Paso del Macho. A large, opaque species, the head, thorax, and underside black, cinereo-pubescent; the elytra luteous or brown, with the pubescence yellowish; the thorax is longer than broad, and narrowed in front; the anterior tibiæ have two spurs in the male.

27. **Epicauta jimenezi.**

Epicauta jimenezi, Dugès, An. Mus. Michoacano, ii. p. 73[1].

Hab. Mexico, Ventanas in Durango (*Forrer*), Canelas in Durango (*Becker*), Guadalajara (*Flohr*[1]).

We have received seven specimens of this species—six from Canelas and one from Ventanas. *E. jimenezi* is perhaps nearest allied to *E. pennsylvanica*, but is very much larger than that insect (equalling *E. corvina* in this respect), and also differs from it in the purplish elytra and in having the spurs of the hind tibiæ subequal; the male, as in *E. pennsylvanica*, has two spurs to the anterior tibiæ. The antennæ are filiform, becoming a little thinner outwardly, the third joint very elongate; the labrum is rather deeply emarginate.

28. **Epicauta corvina.**

Lytta corvina, Lec. Journ. Acad. Phil. 2nd ser. iv. p. 21 (1858) [1].
Epicauta corvina, Horn, Proc. Am. Phil. Soc. xiii. pp. 96, 102 [2].
Cantharis nigerrima, Dugès, La Naturaleza, i. p. 162, t. 1. figg. 10, *b* 1–8 [3].
Epicauta nigerrima, Dugès, An. Mus. Michoacano, ii. p. 77 [4].
Epicauta chevrolatii, Dej. Cat. 3rd edit. p. 247 [5].

Hab. North America, Llano Estacado and Arizona [1], Colorado to Arizona [2], Texas (*coll. F. Bates*).—Mexico [5], Canelas in Durango (*Becker*), Villa Lerdo in Durango, Santa Clara in Chihuahua (*Höge*), Puebla (*Sallé*), Leon in Guanajuato (*Dugès* [3], *Sallé*), Mineral del Cedro [3], Guanajuato [4] (*Dugès*), State of Vera Cruz (*Flohr* [4]).

A large velvety-black, robust species, the pubescence above and beneath black; the thorax a little broader than long; the anterior tibiæ with two spurs in the male. Dr. Horn (Trans. Am. Ent. Soc. xii. p. 107) has identified Dugès's species with that of Leconte: Dugès [4] demurs to this, nevertheless Mexican specimens do not differ in the slightest from a Texan example of *E. corvina* now before me.

29. **Epicauta pennsylvanica.**

Cantharis pensylvanica, De Geer, Mém. des Ins. v. p. 15, t. 13. fig. 1 (1775) [1].
Lytta pensylvanica, Lec. Proc. Acad. Phil. vi. p. 339 [2].
Epicauta pensylvanica, Horn, Proc. Am. Phil. Soc. xiii. p. 102 [3].
Lytta atrata, Fabr. Syst. Ent. p. 260 [4].
Cantharis atrata, Oliv. Ent. iii. 46, p. 17, t. 2. fig. 19 [5].
Lytta coracina, Illig. Magaz. iii. pp. 171, 172 [6].
Meloe nigra, Woodh. Med. Repos. iii. p. 213 [7].
Lytta morio, Lec. Proc. Acad. Phil. vi. p. 447 [8].
Epicauta potosina, Dugès, An. Mus. Michoacano, ii. p. 89 [9].

Hab. North America [1 2 5], Middle States [3] to Texas [3 8].—Mexico, Monclova in Coahuila (*Dr. Palmer*), Huasteca de San Luis Potosi (*Dugès* [9]), Villa Lerdo in Durango (*Höge*).

Found in plenty by Herr Höge at Villa Lerdo. As Dugès remarks [9], this species may be known from *E. corvina* (=*nigerrima*, Dug.) by its smaller size and by the outer spur of the posterior tibiæ being spoon-shaped and much broader than the inner one. Durango specimens agree perfectly with others from Texas before me. This insect is of a uniform black colour, with black pubescence, the upper surface very densely, finely punctured, the antennæ setaceous.

30. **Epicauta nigra.**

Cantharis nigra, Dugès, La Naturaleza, i. p. 161, t. 2. figg. 7, *b* 1–7 (1869) [1].
Epicauta nigra, Dugès, An. Mus. Michoacano, ii. p. 76 [2].
? *Epicauta funebris*, Horn, Proc. Am. Phil. Soc. xiii. p. 102 (1873) [3]; Trans. Am. Ent. Soc. xii. p. 107 [4].

Hab. North America, Texas [3].—Mexico, State of Guanajuato [2], Hacienda de La Noria in Michoacan [1], Guadalajara [2] (*Dugès*), Morelia in Michoacan (*Dugès* [2], *Höge*), Michoacan (*Sallé*), Atenquique in Jalisco (*Höge*).

We have only received three specimens that can be satisfactorily referred to *E. nigra*. Dugès also quotes [2] Jalapa (*Flohr*) as a locality, but it is probable that the Jalapa insect belongs to another species. *E. nigra* is one of several very closely-allied forms, which are difficult to separate except by male characters; and, as Dugès remarks [2], small examples of it resemble the black variety of *E. stigmata*. The specimens I refer to the present species have the pubescence entirely black; the antennæ long and setaceous *, the first joint elongate, longer than the third, the latter also elongate; the thorax longer than broad, more elongate than in *E. stigmata*, subparallel at the sides behind, densely and finely punctate, and with well-marked median depression; the anterior tibiæ with two spurs in the male; the spurs of the posterior tibiæ subequal, stout. Dr. Horn informs me that *E. funebris* differs from *E. nigra*, Dugès, in its stouter hind tibial spurs, and in not having a median thoracic impression; nevertheless, it is probable they are not really distinct.

31. **Epicauta atricolor.**

Elongate, black or blackish-brown, above and beneath somewhat thickly clothed with similarly-coloured decumbent pubescence. Head densely, finely punctate, obsoletely canaliculate, with a smooth reddish, narrow, longitudinal space in the middle between the eyes, the latter large and deeply emarginate; last joint of the maxillary palpi (♂) elongate-ovate, obliquely truncate at the tip; antennæ stout and filiform in both sexes, becoming slightly thinner towards the apex, moderately long in the male, a little shorter in the female, joint 1 comparatively short, stout, 2 very short, 3 twice as long as 2 and one-half longer than 4, 4–10 subequal; prothorax about as long as broad, subcampanulate, densely, finely punctate, and with a smooth, impressed median line, the disc depressed in the middle before the base; elytra densely, finely punctate; spurs of the hind tibiæ rather stout, subequal; the anterior tibiæ with two spurs in the male. Length 10-14 millim. (♂ ♀.)

Hab. Mexico, Matamoros Izucar, Oaxaca (*coll. F. Bates, Sallé*), Jalapa (*Höge*).

Eight examples. Specimens of this perplexing species are labelled with the preoccupied name of *Cantharis fumosa*, St., in the Sallé collection; others are ticketed *E. nigra*, Dugès, teste Haag, in that of Mr. F. Bates. *E. atricolor* approaches the N.-American *E. puncticollis* and *E. oblita* in the form of the antennæ, but differs from both of them in the densely-punctured head and thorax, decumbent pubescence, and longer antennæ. The much shorter, stouter, and more filiform antennæ separates it from *E. nigra* (as here understood) and *E. atripilis*; in its bicalcarate anterior tibiæ in the male it agrees with *E. nigra*. *E. pennsylvanica* has a more quadrate thorax, unequal hind tibial spurs, more setaceous antennæ, &c. In one abraded (? abnormal) example from Matamoros Izucar the head and thorax are more coarsely and sparsely punctate; it may belong to another species.

* Dugès [1] states that joints 4–10 progressively diminish in thickness; in his second description [2] he merely gives "filiform."

32. **Epicauta leoni.**

Epicauta leoni, Dugès, An. Mus. Michoacano, ii. p. 74 [1].

Hab. Mexico, Morelia in Michoacan (*Dugès* [1]), Tenango del Valle (*Richardson*).

We have received an abraded example (♂) of an *Epicauta* possibly belonging to this species. *E. leoni* (♂) is described as having the first joint of the antennæ sinuous on the inner side towards the apex, appearing subangular in the middle, joint 2 half the length of 3, 3 longer than 4, 4–10 subequal. The specimen (♂) from Tenango del Valle is black, with sparse, fine, black pubescence, and, at first sight, would appear to be only an abraded dark example of *E. stigmata*; it has two spurs to the anterior tibiæ.

33. **Epicauta cinctipennis.** (Tab. XIX. fig. 18.)

Lytta cinctipennis, Chevr. Col. Mex., Cent. i. fasc. iii. no. 55 [1].
Cantharis cinctipennis, Dugès, La Naturaleza, i. p. 126, t. 2. figg. 3, *b* 1 [2].
Epicauta cinctipennis, Dugès, An. Mus. Michoacano, ii. p. 85 [3].
Epicauta circumscripta, Sturm, Cat. p. 175 [4].

Hab. Mexico [4] (*Sallé, ex coll. Sturm*), Minas de Zimapan (*Chevrolat* [1]), Quiroga in Michoacan (*Dugès* [3]), Guanajuato (*Dugès* [2 3], *Sallé*), San Miguelito, Mexico city (*Dr. Palmer*), Zacualtipan in Hidalgo (*Höge*), Durasnal (*Sallé*).

Not uncommon in the highlands of Mexico. *E. cinctipennis* may easily be known from *E. cinerea* (margined form) by its short, subtransverse, less densely-punctured thorax, more filiform antennæ, and more slender hind tibial spurs. The antennæ, as in *E. cinerea*, have the third joint unusually elongate, longer than the first, the latter short. The anterior tibiæ have two spurs in the male.

34. **Epicauta croceicincta.** (Tab. XIX. fig. 19, ♂.)

Cantharis croceicincta, Dugès, La Naturaleza, v. p. 143, t. 4. figg. 5, 5 *a–c* [1].
Epicauta croceicincta, Dugès, An. Mus. Michoacano, ii. p. 79 [2].

Hab. Mexico, Guanajuato (*Dugès* [1]), Tupataro (*Dugès* [2], *Höge*).

Found in plenty by Herr Höge at Tupataro. This species, as Dr. Horn remarks (Trans. Am. Ent. Soc. xii. p. 107), is related to *E. cinerea*, but is more slender; the thorax is much more elongate and more rugosely punctured, and the first joint of the antennæ is longer (not shorter) than the third, the latter relatively less elongate. The elytra are stated by Dugès [2] to have the sutural, apical, and lateral margins fringed with yellow pubescence; in all the examples before me the pubescence along the apical margin is black. The apical margin of each ventral segment is yellowish-pubescent. The anterior tibiæ have two spurs in the male. Dugès's figure (5) is incorrect and misleading, the elytra being represented much too short.

35. **Epicauta subatra.**

Epicauta subatra, Dugès, An. Mus. Michoacano, ii. p. 72[1].

Hab. Mexico (*Flohr*[1]).

Unknown to me, and apparently described from a single example (♀).

E. subatra is described as "deep black, sparsely pubescent, the apical margins of the ventral segments and the margins of elytra with a fringe of white hairs, the antennæ filiform, the head coarsely punctate, the thorax and elytra granulate-punctate, the spurs of the posterior tibiæ spiniform."

36. **Epicauta tripartita.** (Tab. XIX. fig. 20, ♂.)

Elongate, stout, deep black, opaque, densely and coarsely pubescent; the head, a patch on either side of the disc of the prothorax, and the base and apex of the elytra, rather broadly, black, the rest of the pubescence of the upper surface cinereous; beneath cinereo-pubescent, the metasternal side-pieces and the sides and tip of the venter sometimes marked with black; legs black-pubescent, the base of the femora only with cinereous hairs. Head densely, finely punctate, more sparsely so in front, with a smooth median line, which is of a fulvous colour between the eyes, the latter deeply emarginate and not prominent, the labrum large and very feebly emarginate; maxillary palpi black, the apical joint (♂) elongate-triangular; antennæ black, elongate, setaceous—joint 1 long and stout, 2 short, half the length of 3, 3 almost as long as 1 and very much longer than 4, 4–10 subequal, diminishing in thickness, 11 slightly longer than 10; prothorax longer than broad, the sides parallel behind, gradually rounded and converging in front, densely, finely punctate, and with a median groove; elytra elongate, subparallel, finely scabrous-punctate; legs long and stout, the spurs of the hind tibiæ long, stout, and subequal; last ventral segment rather deeply emarginate, and the anterior tibiæ with two spurs, in the male.

Length 18–19 millim. (♂ ♀.)

Hab. Mexico, Ventanas in Durango (*Forrer*).

One female and two males. Allied to *E. cinerea*, but differing from that species in all its varieties by the more elongate basal joint of the antennæ (this joint is shorter than the third in *E. cinerea*) and the longer thorax, as well as in the arrangement of the pubescence on the elytra. The punctuation of the head and thorax is dense and fine, finer than in *E. funesta*, *E. atripilis*, *E. atra*, &c. The antennæ in the female are a little shorter than in the male. The pubescence on the terminal dorsal segment is black.

37. **Epicauta cinerea.**

Meloe cinereus, Forst. Nov. Sp. Ins., Cent. i. p. 62 (1771)[1].

Meloe cinerea, Pallas, Icon. Ins. p. 98, t. E. fig. 30 (1781)[2].

Lytta cinerea, Lec. Proc. Acad. Phil. vi. p. 339 (nec Fabr.)[3].

Epicauta cinerea, Horn, Proc. Am. Phil. Soc. xiii. p. 101[4].

Lytta marginata, Fabr. Syst. Ent. p. 260 (1775)[5].

Cantharis marginata, Oliv. Ent. iii. 46, p. 15, t. 1. fig. 2 (1795)[6]; Dugès, La Naturaleza, iv. p. 59, t. 2. figg. 2, 2 *a–g*[7].

Epicauta marginata, Dugès, An. Mus. Michoacano, ii. p. 78[8].

Meloe fimbriatus, Thunb. Dissert. Nov. Ins. Sp. vi. p. 228 (1791) [9] *.
Meloe clematidis, Woodh. Med. Repos. iii. p. 213 [10].

Typical form. The elytral pubescence black, the sutural, lateral, and apical margins cinereous; the prothorax usually with the sides and a median line, sometimes in great part, cinereo-pubescent.

Hab. North America, Atlantic States, Middle States [4].—Mexico, State of Vera Cruz (*Sallé* [7 8]), San Andres Tuxtla (*Sallé*); Guatemala, Senahu (*Champion*), Coban and Tactic (*Conradt*); Nicaragua (*Sallé*), Chontales (*Belt*, *Janson*).

Var. The pubescence of the head, prothorax, and elytra cinereous; the elytra with the sutural, lateral, and apical margins often whitish, the base sometimes black.

Hab. North America.—Mexico, Puebla, Chinautla, Playa Vicente, Cordova, Teapa (*Sallé*), Atoyac in Vera Cruz (*H. H. Smith*), Misantla, Jalapa, Oaxaca (*Höge*).

This appears to be an extremely variable insect as regards the colour of the pubescence, the two forms apparently belonging to one and the same species. We have received about an equal number of each from within our limits, mostly from the Atlantic slope; the cinereous variety does not extend south of Mexico. The two forms have not been received from any one locality in Central America, and they may prove to be distinct. Central-American specimens of the typical form agree with others before me from the United States. The insect also varies enormously in size, from 10–24 millim. The cinereous variety of it may chiefly be known from the similarly-coloured allied forms by the slender, moderately long, and gradually tapering antennæ, the third joint of which is unusually elongate; the apical three joints in the female are much shorter than the intermediate ones; the basal joint is comparatively short. The anterior tibiæ have two spurs in the male.

38. **Epicauta stigmata.**

Cantharis stigmata, Dugès, La Naturaleza, i. p. 159, t. 2. figg. 8, *a* 1–7 (1869) [1].
Epicauta stigmata, Dugès, An. Mus. Michoacano, ii. p. 69 [2].
Epicauta nigritarsis (Chevr.), Dugès, La Naturaleza, iii. p. 48 (nec Lec.) [3].
? *Epicauta intermedia*, Dugès, An. Mus. Michoacano, ii. p. 68 (1889) (nec Haag, 1880 †) [4].

Hab. Mexico, Saltillo in Coahuila, Queretaro (*Dr. Palmer*), Guanajuato (*Dugès* [1 2], *Sallé*), Irapuato in Guanajuato, Aguas Calientes city, Guadalajara in Jalisco, Tacambaro in Michoacan (*Höge*), Matamoros Izucar, Michoacan (*Sallé*), Volcan Ixtaccihuatl 11,500 feet (*Richardson*), Vera Cruz (*Boucard* [4]).

According to Dr. Horn (Trans. Am. Ent. Soc. xii. p. 107), *E. stigmata*, Dugès, is the entirely cinereous variety of *E. cinerea*, Forst. But, if I have identified these species correctly, this is not the case, as *E. stigmata* differs in all its varieties from

* Thunberg [9] gives the "Cape of Good Hope" as locality.
† *Lytta intermedia*, Haag, from Colombia, is apparently a *Macrobasis*.

E. cinerea by its filiform (not setaceous) antennæ, joints 3–6 of which (3 especially) are much less elongate; and by its narrower and less robust shape. *E. stigmata* is, in fact, exceedingly closely allied to *E. horni* (*vicina*, Dugès); but differs from it by the more finely punctured head and thorax, the latter more campanulate in shape, and by the anterior tibiæ having two spurs in the male. The pubescence varies in colour from cinereous to black, with intermixed cinereous hairs.

Dugès states [3] that the insect received by him from Boucard under the name *E. nigritarsis* (Chevr.)=*E. stigmata*, though he subsequently [4] described it as new.

39. **Epicauta neglecta.** (Tab. XIX. fig. 21, ♂, var.)

Lytta neglecta, Haag, Berl. ent. Zeitschr. 1880, p. 54 [1].
Epicauta mixta, Dugès, An. Mus. Michoacano, ii. p. 83 (1889) [2].
Epicauta anilis, Sturm, Cat. p. 175 [3].

Hab. Mexico [1 3] (*Sallé, ex coll. Sturm*), Parada (*Sallé*), Chilpancingo, Xucumanatlan, and Omilteme, all in Guerrero (*H. H. Smith*), Mexico city, Soltepec, Jalapa (*Höge*), Oaxaca (*Flohr* [2], *Höge*).

Found in plenty by Herr Höge at Oaxaca and Mexico city. Variable in the colour of the pubescence, from black with intermixed cinereous hairs (as described by both Haag and Dugès) to entirely cinereous or fulvo-cinereous. The thorax is subquadrate, rounded at the sides anteriorly, shorter in the female than in the male, deeply canaliculate, and somewhat densely, finely punctate. In about half the specimens before me (including a typical *E. neglecta* determined by Haag himself) there is a smooth bare spot on either side of the disc about the middle (as in *E. callosa*, Lec.), a character not mentioned by either Haag or Dugès; this is most distinct in the specimens with light pubescence, in many of the dark examples there is no trace of it. The antennæ are long and subfiliform, becoming slightly thinner towards the tip, the third joint elongate. The anterior tibiæ have two spurs in the male; those of the hind pair are subequal. In one male example from Mexico city (fig. 21) the head is enormously enlarged. The typical specimen (♂) of *E. neglecta* (Haag), in Mr. F. Bates's collection, is more elongate than usual, but with the long series before me I am unable to separate it as distinct. The much longer antennæ and subequal hind tibial spurs separate *E. neglecta* from *E. candidata*, the last-mentioned character also distinguishing the dark varieties of it from *E. pennsylvanica*. In most of the specimens with light pubescence the smooth spots on the thorax are as distinct as they are in *E. callosa*.

40. **Epicauta modesta.**

Lytta modesta, Haag, Berl. ent. Zeitschr. 1880, p. 53 [1].

Hab. Mexico (*coll. Haag* [1]).

"Elongata, opaca, nigra, pube grisea densissime vestita, marginibus elytrorum tenuissime albo pilosis; antennis basi rufis.—Long. 17, lat. 4 millim. ♂ tibiis omnibus subcurvatis, articulo primo tarsorum anteriorum majore, dense spongioso."

I have not seen an *Epicauta* answering to this description, which seems to be based upon a single specimen. The colour of the antennæ is of little value as a specific character.

41. **Epicauta obesa.**

Lytta obesa, Chevr. Col. Mex., Cent. i. fasc. iv. no. 56 (1834) [1].
Cantharis obesa, Dugès, La Naturaleza, i. p. 128 (pars), and iv. t. 2. figg. 4, 4 *a–c* [2].
Epicauta obesa, Dugès, An. Mus. Michoacano, ii. p. 66 [3].
Lytta mus, Haag, Berl. ent. Zeitschr. 1880, p. 55 [4].
Epicauta brevicornis, Chevr. in litt.[5].
Epicauta grisea, Dej. Cat. 3rd edit. p. 247 [6].

Hab. Mexico [2 6], Tultepec (*Chevrolat* [1]), Cordova (*Sallé*), Orizaba (*Sallé*, *H. H. Smith*, *F. D. Godman*, *coll. F. Bates*), Jalapa, Oaxaca (*Höge*), State of Vera Cruz (*Flohr* [3], *Sallé* [3]), Mirador [4].

Not uncommon in the State of Vera Cruz, whence we have received upwards of fifty examples. *E. obesa* may be known from the allied uniformly cinereo-pubescent species by the strongly setaceous antennæ in the male sex, joints 3–6 moderately thickened, and 4 and 5 together not much longer than 3, 1 comparatively short; in the female joints 3–6 are more slender, 4–6 more elongate. The pubescence is fine and not very dense. The anterior tibiæ have two spurs in the male; the outer spur of the hind pair is stouter than the inner one. The head and thorax are closely, finely punctate, the epistoma and labrum more coarsely and sparsely so.

Lytta mus, Haag, to judge from a specimen (♀) from Orizaba (determined by Haag himself) before me, is inseparable from *E. obesa*.

42. **Epicauta auricomans.** (Tab. XIX. figg. 22, ♂; 22 *a*, antenna, ♂.)

Moderately elongate, black, above and beneath densely, uniformly clothed with rather coarse golden or cinereous pubescence; the legs yellowish- or cinereo-pubescent, with the tips of the femora and tibiæ and the tarsi entirely piceous or black. Head closely, finely punctate, coarsely so in front, and with a fine median groove, the labrum feebly emarginate; antennæ black or piceous, setaceous, moderately long, joints 3–6 stouter in the male than in the female, 3 very elongate, much longer than 1, the latter comparatively short; prothorax subquadrate, with the sides rounded and converging in front, punctured like the head, and with a fine median channel; elytra wider than the prothorax in both sexes, very finely scabrous-punctate; legs piceous or black, long and stout; the spurs of the hind tibiæ rather stout, subequal; the tibiæ slightly curved, the hind pair in one example strongly and sinuously bowed inwards, and the anterior pair with two spurs, in the male.

Length 11–14 millim. (♂ ♀.)

Hab. Mexico, Saltillo in Coahuila (*Dr. Palmer*), Almolonga, Oaxaca (*Höge*).

Eleven examples. Closely allied to *E. obesa*, Chevr., and with the antennæ formed

as in that species, but differing from it in the denser, coarser, and more golden pubescence. In one apparently abnormal male example from Oaxaca, which we figure, obtained with others of the same sex at the same locality, the hind tibiæ are strongly and abruptly bowed inwards at about one third from the base.

43. **Epicauta leucocoma.** (Tab. XIX. fig. 23, ♂.)

Elongate, narrow, subparallel, black, somewhat thickly clothed with fine, whitish-cinereous pubescence, the under surface with whiter hairs. Head minutely and closely punctured, somewhat flattened between the eyes, and with a smooth median line, the labrum feebly emarginate, the eyes large; maxillary palpi reddish-testaceous, the apical joint infuscate, the latter elongate and rather narrow in the male; antennæ black or piceous, with joints 1–3 or 1–4 reddish-testaceous towards the base, long, slender, and filiform, joint 1 elongate, about as long as 3, 2 short, only half the length of 4, 4–10 slightly decreasing in length, 4 shorter than 3, 11 longer than 10; prothorax slightly longer than broad, narrow, subcampanulate, parallel at the sides behind, punctured like the head, and with a fine median line; elytra much wider than the prothorax, very elongate and subparallel in both sexes, minutely punctured; legs (including the coxæ) flavo- or reddish-testaceous, with the apical joints of the tarsi more or less infuscate, long and slender, very sparsely pubescent, the spurs of the hind tibiæ acute, subequal; anterior tibiæ with two spurs in the male.

Length 10–13, breadth 2⅓–3 millim. (♂ ♀.)

Hab. Mexico, Tepanistlahuaca (*Sallé*), Acapulco (*Höge*).

Five specimens. A very elongate, narrow, subparallel species, with uniform whitish pubescence; the legs (the tips of the tarsi excepted) reddish-testaceous, long and slender, very sparsely pubescent; the antennæ slender and filiform, with the basal joints partly reddish. The head and thorax are very finely punctate.

44. **Epicauta subrubra.**

Epicauta subrubra, Dugès, An. Mus. Michoacano, ii. p. 83 [1].

Hab. Mexico (*Flohr* [1]).

Apparently described from a single (♂?) example. "Black, covered with reddish-pubescence; the head and thorax densely punctate; the head flattened in such a manner that the vertex appears to be much thinner than usual; the antennæ filiform, the joints somewhat flattened; the elytra granulose; the spurs of the hind tibiæ stout, subequal."

45. **Epicauta ferruginea.**

Lytta ferruginea, Say, Journ. Acad. Phil. iii. p. 298 (1824) [1]; Complete Writings, ii. p. 167 [2]; Lec. Proc. Acad. Phil. vi. p. 341 [3].

Epicauta ferruginea, Horn, Proc. Am. Phil. Soc. xiii. pp. 95, 98 [4].

? *Lytta sartorii,* Haag, Berl. ent. Zeitschr. 1880, p. 56 [5].

Hab. North America [1 2], Southern and South-western States [3], Dacota to New Mexico [4].—Mexico, Monclova in Coahuila, Alvarez Mountains (*Dr. Palmer*), Saltillo in Coahuila (*Dr. Palmer*, *Höge*), Aguas Calientes city (*Höge*), Mirador (*coll. Haag* [5]).

We have received five specimens of this species from Northern Mexico. Haag [5] states that his *L. sartorii*, which he described (imperfectly) from a single example, is possibly a variety of *E. ferruginea*, and in this I am inclined to agree with him; I have not, however, seen a specimen from so far south. The Mexican examples have cinereous pubescence and they agree well with the similarly-coloured Texan specimens before me.

E. ferruginea and the following two species belong to a little group in which the antennæ are very short, similar in thickness throughout, and with the joints closely articulated; no species of this section appears to have been known to Dugès. An abundant species in the Southern States.

46. **Epicauta candidata.**

Moderately elongate, black, above and beneath densely clothed with coarse, decumbent, whitish-cinereous pubescence; the head and prothorax closely and finely punctured, and each with an impressed median line, the prothorax with an ill-defined, small, smooth spot on either side of the disc about the middle, the elytra more finely punctate. Head very little wider than the prothorax, the epistoma and labrum with a few coarse scattered punctures, the labrum feebly emarginate, the eyes narrow and feebly emarginate; antennæ black, short, about reaching the base of the prothorax, the joints closely articulated, cylindrical, 1 and 3 about equal in length, 3 twice as long as 2, and one-half longer than 4, 4–10 subequal; prothorax as long as broad, subcampanulate, slightly sinuous at the sides behind; elytra considerably wider than and about four times as long as the prothorax, widening to beyond the middle; beneath closely and finely punctured; the spurs of the hind tibiæ stout, unequal, the outer one broad and spoon-shaped.

Length 14½ millim. (♀.)

Hab. Mexico, Villa Lerdo in Durango (*Höge*).

In having a smooth, bare, small spot on either side of the disc of the thorax, and also in its short antennæ, this species resembles the North-American *E. callosa*, Lec. (numerous specimens of which from Texas are now before me), from which it differs in its much larger size and more elongate shape, the narrower and more transverse eyes, the unequal spurs to the hind tibiæ, and the less dense punctuation of the head and thorax. The hind tibial spurs resemble those of *E. pennsylvanica*. The pubescence is very coarse, dense, and uniform.

47. **Epicauta emarginata.** (Tab. XIX. fig. 24.)

Moderately elongate, subparallel, black, very densely clothed above and beneath with coarse whitish pubescence, the pubescence completely hiding the sculpture. Head densely, finely punctate, with a distinct median line; the eyes rather prominent, scarcely emarginate; labrum broadly, deeply, semicircularly emarginate (having the appearance of being obtusely produced on either side in front); mandibles toothed on the inner side towards the base, entire at the tip; last joint of the maxillary palpi oblong-ovate, obliquely truncate at the tip; antennæ black, short, about reaching the base of the prothorax when the head is extended, the joints cylindrical, closely articulated, and not tapering outwardly—1 stout, about as long as 3, 2 very short, 3 nearly twice as long as 4, 4–10 subequal, 11 one-half longer than 10; prothorax a little broader than long, narrower than the head, transversely convex, the sides strongly rounded before the middle and slightly converging behind, the hind angles very obtuse, the surface densely, finely punctate, with a faint median line; elytra subparallel, moderately elongate, densely and finely granulate;

beneath densely, finely punctate; legs short and stout, the hind tibial spurs slender, subequal; anterior femora slightly dilated and with their inner face concave, and the anterior tibiæ with two spurs, in the male.

Length $8\frac{1}{2}$–10 millim. (♂ ♀.)

Hab. Mexico, San Isidro in Coahuila (*Höge*).

Five examples of this species were obtained by Herr Höge during his second Mexican expedition. In the form of the labrum *E. emarginata* is intermediate between *Gnathospasta* and the normal *Epicautæ*; the mandibles, however, are shorter and less developed than in *Gnathospasta*, and they are toothed on the inner side towards the base. The present species resembles the cinereous variety of *E. ferruginea*, and has the antennæ formed as in that insect, but the thorax is more rounded at the sides, with less prominent hind angles; the upper and under surfaces are densely, finely punctate, and thickly clothed with coarse, whitish pubescence. *E. fissilabris*, Lec., from Lake Superior, &c., appears to have a similarly emarginate labrum.

48. **Epicauta singularis.** (Tab. XIX. fig. 25, ♀.)

♂. Moderately elongate, subparallel, black, thickly clothed with cinereous or fulvo-cinereous pubescence, the under surface with longer and coarser hairs. Head closely and finely punctate, flattened between the eyes, and with a fine median groove, the labrum scarcely emarginate, the eyes strongly transverse; maxillary palpi piceous or black, the apical joint oblong-ovate, rounded at the tip; antennæ black, elongate, filiform, rather stout, the joints flattened-cylindrical—1 comparatively short, not so long as 4, 2 very short, 3 elongate, more than three times as long as 2, 4–10 subequal, much shorter than 3, 11 a little longer than 10; prothorax transversely-subquadrate, the sides parallel in front and slightly sinuous behind, the anterior angles prominent, the surface uneven, densely and finely punctate, the disc transversely raised in the centre anteriorly, depressed between this and the apex, and with an interrupted median groove, which is more distinct in front than at the base; elytra somewhat flattened on the disc, minutely punctured; beneath with an almost bare spot on the middle of each of the ventral segments, these latter densely, finely punctate; legs black, densely cinereo-pubescent, the spurs of the hind tibiæ slender; the anterior tibiæ with two spurs.

♀. The antennæ less elongate; the elytra transversely depressed below the base and also at the middle, the suture longitudinally, tubercularly raised at one-third from the apex.

Length 7–10 millim. (♂ ♀.)

Hab. Mexico, Monterey in Nuevo Leon, Saltillo in Coahuila (*Höge*).

Eleven examples, six of which are females, all but one from Monterey. This peculiar species differs from all others here enumerated in the transversely-quadrangular thorax, the anterior angles of which are prominent, and the disc transversely raised in the middle anteriorly; the female possesses very remarkable sexual characters.

49. **Epicauta compressicollis.** (Tab. XIX. figg. 26; 26 *a*, antenna.)

Elongate, narrow, parallel, brownish-luteous, the head and prothorax obscure ferruginous, the eyes and labrum black; the upper surface very finely and rather sparsely cinereo-pubescent. Head large and convex, closely, minutely punctate, and with a fine median line; the eyes very large and convex, feebly emarginate; the labrum feebly emarginate; maxillary palpi black, the apical joint elongate, ferruginous at the tip; antennæ black, setaceous, moderately long, joint 1 elongate, 2 more than half the length of 3, 3–10 subequal in length, 6–10 gradually decreasing in thickness, 11 a little longer than 10; prothorax narrow,

slightly longer than broad, compressed at the sides behind and narrowing in front, the disc transversely depressed anteriorly and with a fine median line, the surface densely, minutely punctured; elytra long and parallel, very much wider than the prothorax, minutely scabrous-punctate; beneath reddish-testaceous, the sternal side-pieces and the apex of each ventral segment piceous, finely cinereo-pubescent, closely punctured; legs rather slender, piceous, cinereo-pubescent, the spurs of the hind tibiæ slender.
Length 11 millim.

Hab. Mexico, Villa Lerdo in Durango (*Höge*).

One specimen, probably a female. This species has joints 3–10 of the antennæ subequal in length, 3 comparatively short, not longer than 4, 2 more than half the length of 3. It is of an obscure luteous colour, with very fine, rather sparse, cinereous pubescence; the head is large, and the thorax narrow and compressed at the sides behind; the eyes are large; the punctuation is very fine and close.

PYROTA.

Pyrota, Leconte, Class. Col. N. Am. p. 273 (1862); Leconte & Horn, Class. Col. N. Am. 2nd edit. p. 421 (1883); Horn, Trans. Am. Ent. Soc. xii. p. 112.

The species hitherto referred to this genus are all American, and range from the United States to Brazil. *Pyrota* differs from *Cantharis* and *Pomphopœa* in the antennæ being setaceous or subfiliform, not thickened externally, and from *Epicauta*, &c., by the anterior femora and tibiæ being without a silky-pubescent concave space on their inner face; all our species have the upper surface more or less yellowish, with black vittæ or spots, the black sometimes preponderating, and the elytra usually glabrous. The last joint of the maxillary palpi in the male varies greatly in shape according to the species, from exceedingly broad and somewhat scaphiform to obliquely pyriform, with the underside deeply excavated; in *P. rugulipennis*, &c., it is elongate-ovate in both sexes, and not excavate beneath in the male *. The antennæ have their first joint obliquely truncate, and the second joint articulated to it near the outer apical angle, so that they appear to be subgeniculate. In *P. rugulipennis*, ♂, the sixth ventral segment (not the terminal, or seventh, which is incised) has an elongate-triangular depression extending from the apex forwards, the depression filled with membrane, the same segment in the female being deeply arcuate-emarginate at the apex.

Of the fifteen *Pyrotæ* here enumerated, seven also occur in the United States, one only extending south of Mexico.

Elytra yellow, with three broad black fasciæ, the third fascia extending to the apex	*terminata*, Lec.
Elytra yellow, each with two spots at the base, two oblong, more or less coalescent spots at the middle, and a lunate mark before the apex, black	*punctata*, Casey.

* The sexual characters as given by Dr. Horn (*op. cit.*) require modification.

Elytra yellow, each with two spots at the base, a median fascia, and the apex black . . . . . *mylabrina*, Chevr.

Elytra yellow, each with a large spot at the base and a very broad common post-median fascia black . . . . . *rugulipennis*, n. sp.

Elytra yellow, each with two spots at the base and a broad more or less elongate post-median fascia, the latter not reaching the suture, and sometimes confluent with the humeral spot, black . . . . . *postica*, Lec.

Elytra yellow or reddish-yellow, each with a median vitta, sometimes narrowed in front and with a spot separated from it at the base on the inner side, black.

Suture pale.

Surface vaguely sulcate . . . . . *tenuicostatis*, Dugès.

Surface not sulcate . . . . . *divirgata*, Vill. & Peñaf.

Suture piceous or black, usually more broadly so towards the base . . . . . *decorata*, Haag.

Elytra black, with the sutural, apical, and lateral margins reddish-yellow . . . . . *akhurstiana*, Horn.

Elytra black, with the sutural and lateral margins narrowly, an oblique basal stripe on the disc, and a subapical streak, yellow . *insulata*, Lec.

Elytra yellow, each with two narrow black vittæ . . . . . *bilineata*, Horn.

Elytra unicolorous, luteous or reddish-brown.

Surface sulcate.

Thorax thickly punctured . . . . . *hirticollis*, n. sp.

Thorax very sparsely punctured . . . . . *mariarum*, n. sp.

Surface not sulcate.

Antennæ rather slender; thorax with a black cruciform mark on the disc . . . . . *nobilis*, Haag.

Antennæ shorter, stout, the joints ovate; thorax with two black spots on the disc . . . . . *quadrinervata*, Herr. & Mend.

1. **Pyrota terminata.** (Tab. XX. fig. 1, ♂.)

Pyrota terminata, Lec. New Sp. Col. p. 159 (1866) [1]; Horn, Trans. Am. Ent. Soc. xii. p. 113 (nec Sturm) [2].

Lytta mylabrina, Lec. Proc. Ac. Phil. vi. p. 337 [3].

Pyrota mylabrina, Horn, Trans. Am. Ent. Soc. xii. p. 112, t. 5. fig. 13 (nec Chevr.)[4].

Pyrota concinna, Casey, Ann. N. York Acad. vi. p. 174 (1891) [5].

Hab. North America, Kansas [1], Colorado [4], Missouri [2], Western Texas [5], Mexican boundary [3].—Mexico [4], Villa Lerdo in Durango, Chihuahua city, Monterey in Nuevo Leon (*Höge*).

Found in plenty by Herr Höge at Villa Lerdo. With the numerous Mexican and Texan examples before me I am unable to distinguish more than one species.

The type of *P. terminata* has entirely black legs; in all the specimens I have seen

the femora and tibiæ are yellow, except at the tip. The Villa Lerdo examples agree with Casey's description [5] of *P. concinna* as regards the elytral sculpture, but they have the third and fourth joints of the antennæ subequal in length (the third not shorter than the fourth in the male). Those from Monterey have the elytra duller and more densely punctured beyond the middle. The colour of the basal joint of the antennæ is variable. The apical joint of the maxillary palpi in the male is moderately stout, obliquely-pyriform.

2. **Pyrota punctata.** (Tab. XX. fig. 2, ♂.)

Pyrota punctata, Casey, Ann. N. York Acad. vi. p. 173 [1].

Hab. North America, Western Texas [1]. — Mexico, San Pedro in Coahuila (*Dr. Palmer*), Villa Lerdo in Durango (*Höge*).

This species closely resembles the true *P. mylabrina*, but differs constantly in the elytral markings: the spot at the apex is in the form of a narrow transversely-lunate fascia, which does not reach the apical, sutural, or lateral margins, this spot being very rarely obsolete; the post-median fascia is formed by two oblong, more or less coalescent, spots, the inner one extending forwards; the two basal spots are oblong, the outer one narrow and extending downwards. *P. punctata* also differs from *P. mylabrina* in its much larger eyes, and in the sparser and more distinct punctuation of the elytra. *P. terminata* has three broad black fasciæ (the anterior two not reaching the suture), and the elytra are more distinctly punctured. The apical joint of the maxillary palpi in the male is moderately stout, obliquely-pyriform. Found in plenty by Herr Höge at Villa Lerdo.

3. **Pyrota mylabrina.** (Tab. XX. fig. 3, ♂.)

Pyrota mylabrina, Chevr. Col. Mex., Cent. i. fasc. iii. no. 53 (1834) (nec Lec. and Horn) [1]; Dugès, An. Mus. Michoacano, ii. p. 95 (pars) [2].

Hab. Mexico, San Pedro in Coahuila (*Dr. Palmer*), Tuspan [1 2] (*Sallé*).

We have received nine examples of this species—six from Coahuila and three from Tuspan; and others are contained in Mr. F. Bates's collection.

P. mylabrina, Chevr., to judge from the specimens before me, varies but little in elytral markings; it may always be known from the allied forms, *P. terminata*, Lec., and *P. punctata*, Casey, by its much smaller, more transverse eyes. The apical joint of the maxillary palpi in the male is very stout, obliquely-pyriform. The elytra have two spots at the base (the inner one rounded, the outer one narrow and oblong), a transverse moderately large spot or fascia at the middle (not reaching the sutural or lateral margins), and the apex rather broadly black, the apical fascia excised in the middle in front. The allied *P. engelmanni*, Lec., from Texas, &c., has a broader median and a narrower apical fascia, and the underside and legs black.

4. **Pyrota rugulipennis.** (Tab. XX. figg. 4, ♂; 4 *a*, labium; 4 *b*, maxillary palpus, ♂; 4 *c*, profile of œdeagus; 4 *d*, sixth ventral segment, ♂.)

Head and prothorax shining, reddish-yellow, the former on all sides (so as to enclose a large oval frontal patch), and the latter with an oblique patch on either side of the disc behind (the two more or less coalescent) and a lateral spot, black—in one specimen both are entirely reddish-yellow; the elytra opaque, yellow, with a large rounded spot close to the base (not reaching the suture or lateral margin) and a very broad post-median fascia (not extending on to the lateral margin), black; beneath black, the terminal ventral segments sometimes reddish-yellow; legs reddish-yellow, the femora and tibiæ at their apex and the tarsi black: antennæ black, the basal one or two joints more or less reddish-yellow; the head and prothorax finely and sparsely, the under surface coarsely and thickly, pubescent. Head sparsely, coarsely punctate, the vertex sulcate, the eyes moderately large; apical joint of the maxillary palpi narrow in both sexes, elongate-ovate, with the tip truncate, the underside not excavated in the male; antennæ strongly setaceous, moderately stout, joint 1 as long as 2 and 3 united, 3 considerably longer than 4, 4–10 subequal in length, 7–11 rapidly diminishing in thickness, 11 very slender; prothorax slightly longer than broad, narrowing in front, sparsely, irregularly, and rather coarsely punctate, the disc transversely flattened before the middle, depressed in the centre at the base, and with a smooth median space; elytra densely scabrous-punctate, and with four very fine raised lines; beneath thickly punctured; legs stout, the hind tibial spurs slender, subequal; sixth ventral segment (♂) with an elongate-triangular depression in the middle, extending from the apex nearly to the base, the depression filled with membrane—(♀) deeply arcuate-emarginate at the apex.

Length 13½–20 millim. (♂ ♀.)

Hab. Mexico, Canelas in Durango (*Becker*).

Five males and one female. This species, the sexes of which are difficult to distinguish, except by the form of the sixth ventral segment, may easily be known from all the other Mexican *Pyrotæ* by its finely rugulose, opaque elytra, the latter with a large rounded basal spot and a very broad, common, post-median fascia. The head and thorax vary in colour, the black markings being entirely obliterated in one example; the apices of the elytra are yellow, the post-median fascia occupying from one-third to nearly one-half of their total length.

5. **Pyrota postica.** (Tab. XX. fig. 5, ♂.)

Pyrota postica, Lec. New Sp. Col. p. 160 (1866) [1]; Horn, Trans. Am. Ent. Soc. xii. p. 113, t. 5. fig. 15 [2]; Dugès, An. Mus. Michoacano, ii. p. 94 [3]; Casey, Ann. N. Y. Acad. vi. p. 173 [4].

Cantharis maculata (Klug), Lacord. Gen. Col., Atlas, t. 60. figg. 4, 4 *a*, *b* (sine descr.) (nec Say) [5].

? *Pyrota maculosa* (Klug), Dej. Cat. 3rd edit. p. 246 [6].

Pyrota plagiata, Sturm, Cat. p. 174 [7].

Lytta plagiata (Sturm), Haag, Berl. ent. Zeitschr. 1880, p. 49 [8].

Hab. North America, Texas and New Mexico [1 2].—Mexico [6 7 8] (*Sallé, ex coll. Sturm*), Monterey (*Horn* [2]), Villa Lerdo in Durango (*Höge*), Ahualulco in Jalisco (*Peñafiel* [3]).

We have received two males and four females of this species from Mexico. Of these, two (♂) are typical, *i. e.* with the black post-median spot large and subquadrangular (as figured by Dr. Horn [2]); two (♀) have this spot much more elongate,

extending forwards; and two (♀) have this spot extending forwards so as to nearly or quite join the humeral spot (as figured by Lacordaire [5]). The femora and tibiæ are usually yellow, with the tips black, but in one example they are entirely black; the antennæ and underside also vary in colour to entirely black; the apices of the elytra are always broadly yellow. In the male the basal joint of the antennæ is much elongated, almost entirely yellow, and the apical joint of the maxillary palpi is very large, obliquely pyriform, and considerably extended on the external as well as on the inner side. *P. maculata* (Lacord.) is incorrectly identified by Burmeister (Stett. ent. Zeit. 1881, p. 22) with *P. vittigera*, Blanch.; and by Berg (An. Soc. Arg. xv. pp. 67, 68) with *P. divirgata* (Vill. y Peñaf.). The female only of this species appears to have been known to Lacordaire and Haag.

6. **Pyrota tenuicostatis.** (Tab. XX. figg. 6, ♂; 6 *a*, labium, 6 *b*, maxillary palpus, ♂.)

Lytta vittigera, Lec. Journ. Acad. Phil. (2) iv. p. 22 (1858) (nec Blanch.) [1].
Cantharis tenuicostatis, Dugès, La Naturaleza, iv. p. 60, t. 2. figg. 6, 6 *a–k* (1877) [2].
Pyrota tenuicostatis, Dugès, An. Mus. Michoacano, ii. p. 91 [3].
Pyrota dubitabilis, Horn, Trans. Am. Ent. Soc. xii. p. 113, t. 5. fig. 16 (1885) [4].

Hab. North America, near the southern boundary of Texas [1 4].—Mexico, Almolonga (*Dugès* [2]), Plan del Rio (*Höge*), State of Vera Cruz (*Sallé* [2], *Dugès* [3]), San Andres Tuxtla (*Sallé*), Teapa in Tabasco (*H. H. Smith*).

Found in abundance by Herr Höge at Plan del Rio. In this species the elytra have a very broad black discoidal stripe, extending almost from the base to very near the apex, often narrowed anteriorly and with a black spot between it and the suture; the thorax with a large oblique patch on either side of the middle behind, and an oblong patch on either side in front also black; the antennæ, the underside in great part, and the legs (the coxæ and the base of the femora excepted) black. The head is sulcate between the eyes; the thorax has some coarse scattered punctures near the base; the elytra (except at the base) are dull, densely, finely punctate, vaguely sulcate, with four faint carinæ on the disc, and the sutural and lateral margins raised. In the male the last joint of the maxillary palpi is exceedingly large, broadly transverse, and somewhat scaphiform, the three basal joints of the anterior tarsi are very strongly, subangularly produced on their inner side at the apex, and the sixth ventral segment is entire. There can be little doubt that *Lytta vittigera*, Lec. (females only of which are known, and whether they were obtained in Texas or Mexico is uncertain), is a variety of *P. tenuicostatis*, Dugès, with the black vitta on the elytra narrowed anteriorly and having a spot between it and the suture at the base; Dr. Horn's description [4] applies well to this form, which occurs also at Plan del Rio and Tuxtla.

7. **Pyrota divirgata.** (Tab. XX. fig. 7, maxillary palpus, ♂.)

Cantharis divirgata, Villada y Peñafiel, Gaceta méd. de Méx. iii. no. 1, p. 15[1]; Dugès, La Naturaleza, i. p. 164 (1869)[2]; An. Mus. Michoacano, ii. p. 108[3].

Lytta nigrovittata (Höpf.), Haag, Berl. ent. Zeitschr. 1880, p. 51[4].

Hab. Mexico, between Yautepec and Cuernavaca[1] (*Dugès*[2 3], *Höge*), Matamoros Izucar (*Sallé*, *Höge*), Atlixco in Puebla (*Höge*), Mochitlan in Guerrero (*Baron*), Mirador[4].

Var. The head with a spot on either side of the vertex and a broad stripe down the middle in front black; the thorax with a short median vitta, a spot at the sides in front, and some indistinct markings near the hind angles (in addition to the usual spot on either side of the middle of the disc), black; the elytra with the discoidal stripe greatly extended (only separated from the suture and lateral margin by a narrow border of the ground-colour), in two examples coalescent with the basal spot; the underside and legs (the coxæ and the extreme base of the femora excepted) black.

Lytta clavipalpis, Haag, loc. cit. p. 50[5].

Hab. Mexico[5], Chilpancingo in Guerrero (*H. H. Smith*), Yautepec, Plan del Rio (*Höge*), Oaxaca (*Sallé, coll. F. Bates*).

We have received about forty specimens of this species, of which six belong to the var. *clavipalpis*. Varies greatly in the extent of the black markings on the thorax and elytra, and in the colour of the underside and legs, also in size, from $8\frac{1}{2}$–25 millim. *P. clavipalpis* only differs in colour, and an example of it was obtained at Yautepec with one of the palest forms of *P. divirgata*.

In the palest specimens the elytral vitta is very narrow, in some specimens abbreviated anteriorly, and the basal spot is obsolete or nearly so. The femora and tibiæ may be yellow, with the tips only black. The variety *clavipalpis* has the black greatly extended on the elytra, a short median vitta and some additional spots on the thorax, and the underside and legs almost black. The elytra are thickly, minutely punctate, and have some widely-scattered, shallow, coarser impressions. The antennæ always have their basal two or three joints pale. The last joint of the maxillary palpi is very stout and obliquely pyriform in the male. The much longer, smoother, differently-marked thorax, non-sulcate elytra, and different male-characters separate *P. divirgata* in all its varieties from *P. tenuicostatis*.

8. **Pyrota decorata.** (Tab. XX. figg. 8, ♂; 8 *a*, maxillary palpus, ♂; 8 *b*, profile of œdeagus.)

Lytta decorata, Haag, Berl. ent. Zeitschr. 1880, p. 51[1].

Hab. Mexico, Plan del Rio, Jalapa (*Höge*), Tehuantepec (*Sallé*); Guatemala[1] (*Sallé*), San Gerónimo (*Champion*), Capetillo (*Rodriguez*), Escuintla (*Conradt*); Nicaragua, Masaya (*Belt*), Chontales (*Janson*); Costa Rica (*Van Patten*); Panama, Bugaba (*Champion*), Chiriqui (*Ribbe*).

This is the only species of *Pyrota* known as yet as inhabiting the southern part of our region, it ranging from the Mexican State of Vera Cruz to Panama. *P. decorata* may be recognized in all its varieties by the dark suture of the elytra, in this respect approaching the North-American *P. germari* (Hald.), with the description of which it nearly agrees. The head and thorax vary in colour from black to rufous, two small black spots on the disc of the latter excepted. In dark specimens the sutural stripe of the elytra is dilated anteriorly into a large triangular patch—in pale ones it is extended narrowly to the base, with a small oblong spot on either side of it; the discoidal vitta varies from about half to two-thirds of the elytral width, and extends from the humerus (where it is narrow) to near the apex. The legs, antennæ, and underside are black. The elytra are dull, densely, finely punctate; the thorax is narrow and very elongate, with some fine, widely-scattered punctures and indistinct transverse rugæ; the head is sparsely, somewhat coarsely punctate, the vertex sulcate. In some specimens the third joint of the antennæ is shorter than the fourth. The apical joint of the maxillary palpi in the male is very stout, obliquely pyriform. Varies in length from 10 to 27 millim. The female only appears to have been known to Haag. *P. germari* has a black head, with yellow frontal space, a reddish-yellow thorax, with two black spots, and the basal half of the femora and tibiæ yellow.

9. **Pyrota akhurstiana.**

Pyrota akhurstiana, Horn, Trans. Am. Ent. Soc. xviii. p. 44, t. 1. fig. 9 [1].

Hab. North America, Tucson, Arizona [1].—North Mexico (*Akhurst* [1]).

We are indebted to Dr. Horn for a Mexican specimen of this very distinct species. He does not mention [1] the widely-scattered, irregularly-arranged, coarser punctures of the elytra, these being very distinct from the minute close punctuation of the surface. *P. divirgata* has similar, but less distinct, additional punctures on the elytra.

10. **Pyrota insulata.**

Lytta insulata, Lec. Journ. Acad. Phil. (2) iv. p. 22 (1858) [1].

Pyrota insulata, Lec. New Sp. Col. p. 159 [2]; Horn, Trans. Am. Ent. Soc. xii. p. 114, t. 5. fig. 17 [3].

Hab. North America, Texas [1 2 3].—Mexico, Villa Lerdo in Durango (*Höge*).

A single specimen (♀) from Durango differs from two others (♂) from Texas before me in having the black more extended on the thorax and elytra, the latter being very narrowly margined with yellow at the suture and laterally, and having the oblique basal streak narrower, and the anteapical spot very small, not extending to the suture.

11. Pyrota bilineata.

Pyrota bilineata, Horn, Trans. Am. Ent. Soc. xii. p. 115, t. 5. fig. 22[1].

Hab. North America, Colorado and Arizona[1].—Mexico, Northern Sonora (*Morrison*).

Received by us in numbers from Morrison as from Sonora.

12. Pyrota hirticollis. (Tab. XX. figg. 9, ♂; 9 *a*, labium; 9 *b*, maxillary palpus, ♂; 9 *c*, profile of œdeagus.)

Head and prothorax shining, reddish-testaceous, the prothorax with two spots on the disc and two on the flanks, the eyes, and labrum black, the elytra dull reddish-brown, the antennæ, legs (the rufous base of the femora excepted), and underside black; the head sparsely, the prothorax thickly, clothed with erect yellowish-cinereous hairs, the elytra also with a few very widely-scattered, shorter, erect hairs; the metasternum thickly, the rest of the under surface very sparsely, clothed with long hairs. Head sparsely and somewhat coarsely punctate, sulcate on the vertex, the eyes large, feebly emarginate; apical joint of the maxillary palpi (♂) exceedingly broad and scaphiform, concave beneath, that of the labial pair (♂) also very stout; antennæ rather slender, setaceous, joints 3–10 subequal in length, but diminishing in thickness; prothorax narrower than the head, longer than broad, narrowing in front, depressed in the centre behind and broadly transversely flattened before the middle, thickly and somewhat coarsely punctate, with a smooth, flattened, longitudinal median space; elytra about twice as wide as the prothorax, elongate, vaguely, broadly, and rather deeply sulcate, sharply margined at the sides and along the suture, and with four fine distinct raised lines, the surface (except at the base) closely and minutely punctured; beneath very shining, with widely-scattered minute punctures, the metasternum more closely punctate; legs rather slender, the hind tibial spurs subequal; the three basal joints of the anterior tarsi produced on their inner side at the apex, and the sixth ventral segment entire, in the male.

Length 18–21 millim. (♂ ♀.)

Hab. Mexico, Acapulco (*Höge*).

One female and two males of this very distinct species were obtained by Herr Höge. The somewhat thickly punctured, hairy thorax, and the sulcate unicolorous elytra distinguish *P. hirticollis* at a glance from all the allied forms. The elytral pubescence is easily abraded, and it is probable that the elytra themselves are discoloured (by immersion in alcohol) in the specimens described.

13. Pyrota mariarum.

Rather slender, luteous, the head with the labrum, a transverse spot between the eyes, the eyes themselves, and sometimes the sides behind, black; the prothorax piceous or black, with an elongate-triangular median patch in front, sometimes extending to the base, and the basal margin, luteous; the antennæ, underside, and legs (except sometimes the base of the femora) black; the head and prothorax sparsely clothed with erect hairs, the elytra also with a few shorter hairs; the metasternum thickly, the rest of the under surface sparsely, clothed with long hairs. Head with a few widely-scattered punctures, sulcate on the vertex, the eyes large, feebly emarginate; antennæ and palpi as in *P. hirticollis*; prothorax slightly longer than broad, very sparsely and finely punctate, with a smooth median space; the rest as in *P. hirticollis*.

Length 10–13 millim. (♂ ♀.)

Hab. Mexico, Tres Marias Is. (*Forrer*).

This is an insular form of *P. hirticollis*, which inhabits the adjacent mainland, but differs from it in the much sparser and finer punctuation of the head and thorax, and in having the thorax in great part black; it is also much smaller and less robust. The thorax has an elongate-triangular luteous patch on the disc in front, this marking in two specimens extending to the base, the rest being black or piceous. The legs are long and very slender. Three males and one female were obtained by Mr. Forrer.

14. **Pyrota nobilis.** (Tab. XX. fig. 10, ♂.)

Lytta nobilis, Haag, Berl. ent. Zeitschr. 1880, p. 48 [1].

Pyrota nobilis, Dej. Cat. 3rd edit. p. 246 (fide Haag) [2].

Hab. Mexico [1 2], Canelas in Durango (*Becker*), Tonila in Colima (*Höge*), Oaxaca (*Sallé*).

In this species the head and thorax are reddish-testaceous, the former with the base, sides, a short median streak, and two spots between the eyes, and the latter with the flanks and a cruciform mark on the disc black; the elytra brownish-luteous, without markings; the underside, antennæ, and legs (the base of the femora excepted) black. The thorax is smooth, almost impunctate. The apical joint of the maxillary palpi is narrow in both sexes, elongate-ovate, slightly sinuate on the outer side towards the tip, the latter truncate; without concave spongy-pubescent space beneath in the male.

15. **Pyrota quadrinervata.** (Tab. XX. figg. 11, ♂; 11 *a*, maxillary palpus, ♂; 11 *b*, profile of œdeagus; 11 *c*, sixth ventral segment, ♂.)

Cantharis cuadrinervata, Herrera y Mendoza, Gaceta méd. de Méx. ii. no. 17 [1]; Dugès, La Naturaleza, i. p. 109 [2].

Pyrota quadrinervata, Dugès, An. Mus. Michoacano, ii. p. 92 [3].

Pyrota ochracea, Sturm, Cat. p. 174 [4].

Pyrota quadripunctata (Klug), Dej. Cat. 3rd edit. p. 246 (fide coll. F. Bates) [5].

Hab. Mexico [4 5] (*Sallé, ex coll. Sturm; coll. F. Bates*), Pachuca, Real del Monte, and Mineral del Chico, all in Hidalgo (*Herrera and Mendoza* [1 2]), Toluca (*Dugès* [3]), Tupataro in Guanajuato (*Dugès* [3]), Jalapa (*Sallé, Höge, Dugès* [3]), Coatepec (*Höge*).

In this species the head and thorax are reddish-testaceous, the latter with two black discal spots, the elytra luteous, and the antennæ black (the basal joint sometimes testaceous); the colour of the underside and legs is variable. The median third of the femora and tibiæ is usually reddish-testaceous, but this colour sometimes extends to the base. The head is sparsely punctate, the vertex sulcate, the eyes narrow; the antennæ are short, setaceous, and very stout—joint 3 elongate, almost twice as long as 4, the outer joints ovate, diminishing in thickness; the last joint of the maxillary palpi is narrow in both sexes, elongate-ovate, with the tip truncate; the thorax is glabrous,

nearly as broad as long, and bears a few minute scattered punctures; the elytra are dull, minutely punctate, and have three well-marked fine costæ; the legs are stout; the anterior and middle tarsi are considerably dilated in the male; the outer spur of the hind tibiæ is very broad, the inner one acute and slender; the under surface is clothed with very coarse, long, yellowish hairs; the sixth ventral segment in the male is very broadly triangularly excavate along the middle from the deeply-emarginate apex nearly to the base, the cavity being filled with membrane. The short, stout antennæ, the intermediate joints of which are much thickened, the stout legs, &c., distinguish this insect from *P. nobilis*.

CANTHARIS.

Cantharis, Linnæus, Acta Upsal. 1736, p. 19; Horn, Proc. Am. Phil. Soc. xiii. p. 103; Leconte & Horn, Class. Col. N. Am. p. 421; Dugès, An. Mus. Michoacano, ii. p. 96 (1889).
Lytta, Fabricius, Syst. Ent. p. 260.

Cantharis, as adopted here, following Leconte and Horn's classification of the North-American Vesicants, includes only those species with the antennæ thicker externally (at least in the female, the intermediate joints often thickened in the male), the anterior femora and tibiæ without a silky-pubescent concave space on their inner face, the labrum feebly emarginate, and the two portions of each tarsal claw equal in length and separate.

Twenty-five species are here recorded from within our limits, as against thirty-five from the United States; four only occur south of Mexico. Dr. Horn's Group III. is not represented in Central America, and five only of our species (as against eighteen) belong to his Group II. There is a good deal of confusion in the synonymy of several Mexican species, Dugès and Haag having each described certain of them under different names *.

The form of the sixth ventral segment, and in some cases that of the last dorsal segment also, in the male, is a very important character for discriminating between the various species of this genus; but it is not noticed by Haag. In *C. quadrimaculata*, Chevr., and *C. sanguineoguttata*, Haag, the last dorsal segment (or pygidium) has an elongate process in the male; *C. sanguineoguttata* also possesses other extraordinary male characters. *C. quadrimaculata*, *C. biguttata*, *C. proteus*, and *C. variabilis* vary very much in colour; of the two latter, varietal forms still "in copula" have been received from M. Sallé or Herr Höge. *C. dichroa*, Lec., is recorded by Dr. Horn (Proc. Am. Phil. Soc. xiii. p. 112) as from Mexico, but no specimen of it has been received by us.

Outer spur of the hind tibiæ much stouter than the inner one.

Antennæ (♂) with joints 4–6 distorted . . . . . Species 1.
Antennæ (♂) with joint 4 dilated, 5 distorted . . . . . Species 2–4.

* *Cantharis angulicollis*, Dugès, from Lower California = *C. vulnerata*, Lec.

Antennæ (♂) with joints 4 and 5, or 4–6, or 4–7 more or less thickened.
Last dorsal segment (♂) with an elongate process . . . . . Species 5.
Last dorsal segment (♂) normal, rounded at the tip.
Elytra reticulate . . . . . Species 6, 7.
Elytra scabrous-punctate . . . . . Species 8–19.
Antennæ gradually thickening outwardly in both sexes, the intermediate joints not thickened in ♂ . . . . . Species 20–22.
Hind tibial spurs slender, equal.
Antennæ gradually thickening outwardly, the intermediate joints not elongated or thickened in ♂; last dorsal segment (♂) normal . . Species 23, 24.
Antennæ (♂) with joints 4–7 greatly elongated; last dorsal segment (♂) with an elongate process . . . . . Species 25.

1. Cantharis eucera.

Cantharis eucera, Chevr. Col. Mex., Cent. i. fasc. iii. no. 52 (1834) [1]; Dugès, La Naturaleza, i. p. 109, t. 1. figg. 9, *a* 1–7 [2]; An. Mus. Michoacano, ii. p. 101 [3]; Horn, Proc. Am. Phil. Soc. xiii. p. 104 [4].

Cantharis spectabilis, Cast. Hist. Nat. Ins. Col. ii. p. 273 [5] (apud Haag, Berl. ent. Zeitschr. xxiii. p. 412); Lacord. Gen. Col. v. p. 676, nota [6].

Lytta occipitalis, Sturm, in litt.[7]

Hab. North America, near the Mexican border in Texas [4].—Mexico [1 5 6] (*Sallé, ex coll. Sturm*), Huasteca Potosina [3], Morelia [3], Pachuca [2], Atotonilco el Grande [2], Silao in Guanajuato [2] (*Dugès*), Mexico city (*Dugès, Höge*), Puebla, Parada, Guanajuato, Orizaba (*Sallé*), Cholula in Puebla, Zapotlan in Colima, Tacambaro in Michoacan, Esperanza, Cuernavaca, Jalapa (*Höge*), Oaxaca (*coll. F. Bates*); Guatemala [1] (*Sallé*), Cerro Zunil, San Gerónimo (*Champion*), Chimaltenango (*Conradt*); Costa Rica (*Sallé, Van Patten*); Panama, Volcan de Chiriqui 4000 feet (*Champion*).

A common insect of the "tierra templada" of Mexico and Central America, occurring chiefly at elevations of from 3000 to 5000 feet. This is the largest species of the genus in Central America, and may be readily known by its black body and partly rufous head. In the male, joints 4–6 of the antennæ are thickened and deformed, greatly produced on the upper side; the middle tibiæ are distorted and compressed, dilated at the apex, and excavate above and beneath in their outer half; and the sixth ventral segment is feebly emarginate. In the female the antennæ are thickened towards the tip. The spurs of the hind tibiæ are stout and obtuse, the outer one much wider than the other. Varies in length from 14–45 millim. (exclusive of abdomen).

2. Cantharis cardinalis. (Tab. XX. figg. 12, ♂; 12 *a*, sixth ventral segment, ♂.)

Cantharis (Lytta) cardinalis, Chevr. Col. Mex., Cent. i. fasc. i. no. 51 (1833) [1].

Cantharis cardinalis, Dugès, La Naturaleza, i. p. 111, t. 1. figg. 12, *d* 1–6 [2]; An. Mus. Michoacano, ii. p. 102 [3] (nec Lec. and Horn).

Lytta sanguinipennis, Sturm, Cat. p. 174[4].
Lytta dejeanii (Höpf.), Dej. Cat. 3rd edit. p. 246[5].

Hab. Mexico[4 5] (*Sallé, ex coll. Sturm; Boucard*[2]), Tehuacan (*Lesueur*[1]), Matamoros Izucar (*Sallé*, *Höge*), Puebla (*Sallé*), Mochitlan in Guerrero (*Baron*).

In this species the body is black, the elytra are uniformly sanguineous, and the head has a rufous spot on the front. In the male, joints 4 and 5 of the antennæ are much thickened, 5 being distorted and produced on its upper side; the basal joint of the middle tarsi is widened internally; and the sixth ventral segment is depressed in the middle, and very feebly emarginate at the apex. The outer spur of the hind tibiæ is very broad, spoon-shaped, the inner one slender. Dugès[3] also gives Vera Cruz (*Sallé*) as a locality, but perhaps in error.

3. **Cantharis erythrothorax.** (Tab. XX. figg. 13, ♂; 13 *a*, sixth ventral segment, ♂.)

Lytta bisignata, Sturm, Cat. p. 174 (sine descr.)[1].
Cantharis erythrothorax, Mendoza y Herrera, Gaceta méd. de Méx. iii. no. 1[2]; Dugès, La Naturaleza, i. p. 166[3]; An. Mus. Michoacano, ii. p. 102[4].
Cantharis stigmata (Sturm), Dugès, La Naturaleza, v. t. 4. figg. 10, 10 *a*[5].

Hab. Mexico[1] (*Sallé, ex coll. Sturm*), Tonila in Colima (*Höge*), Tupataro in Guanajuato (*Dugès*[4]), Cuernavaca (*Sallé*), Amula in Guerrero (*H. H. Smith*), Tasco[2 3].

We have received sixteen examples of this species. It has the body black, the head and thorax rufous, the anterior portion of the former and two spots on the disc of the latter black. The thorax is deeply transversely depressed before the middle. In the male, joint 4 of the antennæ is much thickened, 5 is strongly acutely produced on the upper side, and 6–10 are subequal; the anterior femora are angularly dilated on the inner side at the middle; the intermediate femora are flattened and dilated, slightly concave beneath; the basal joint of the intermediate tarsi is greatly dilated within; and the sixth ventral segment is depressed and smooth in the middle, and feebly emarginate at the apex. The discal spots on the thorax vary in size, and in one specimen they are almost obliterated. The outer spur of the hind tibiæ is very broad, the inner one slender.

4. **Cantharis mutilata.**

Cantharis (*Lytta*) *mutilata*, Horn, Trans. Am. Ent. Soc. v. p. 155[1], and x. p. 310.

Hab. North America, Arizona[1].—Mexico, Monclova in Coahuila (*Dr. Palmer*), Villa Lerdo in Durango (*Höge*).

Of this species we have received ten examples, one only of which is of the male sex. As Dr. Horn states (Trans. Am. Ent. Soc. xii. p. 108), *C. mutilata* is allied to *C. erythrothorax*, but differs from it in the entirely rufous thorax, as well as by its male

characters. In the male of *C. mutilata* the basal joint of the middle tarsi is strongly dilated internally; the anterior femora are simple; joint 4 of the antennæ is thickened, 5 is deformed and strongly produced on the upper side, and 6 is slightly flattened, but not wider than 7; and the sixth ventral segment is very feebly emarginate. The antennæ in both sexes are shorter, stouter, and more moniliform than in *C. erythrothorax*, and the thorax is less depressed anteriorly. The outer spur of the hind tibiæ is very stout, the inner one acute.

5. **Cantharis quadrimaculata.** (Tab. XX. figg. 14, ♂; 14 *a*, pygidium, ♂; 15, ♂, var.; 15 *a*, pygidium, 15 *b*, sixth ventral segment, of ditto; 16, ♀, var.)

Cantharis quadrimaculata, Chevr. Col. Mex., Cent. i. fasc. iv. no. 57 (1834) [1]; Dugès, La Naturaleza, i. p. 108 [2], and in An. Mus. Michoacano, ii. p. 99 [3]; Horn, Proc. Am. Phil. Soc. xiii. p. 105 [4].

Cantharis disparicornis, Chevr. in litt. (♀) [5].

Lydus bifasciatus, Sturm, Cat. p. 173 [6].

Cantharis bifasciatus (Sturm), Dugès, La Naturaleza, i. p. 106, t. 1. figg. 6, b^1, b^2 [7].

Cantharis fasciolata, Jimenez, Gaceta méd. de Méx. ii. p. 253, fig. (1866) [8]; Dugès, La Naturaleza, i. p. 107, t. 1. figg. 5, a^1–a^{11} [9].

Cantharis octomaculata, Peñafiel y Barranco, Gaceta méd. de Méx. ii. p. 225, fig. (1866) [10].

Lytta mexicana, Klug, Dej. Cat. 3rd edit. p. 246 [11].

? *Cantharis alemani*, Dugès, An. Mus. Michoacano, ii. p. 106 [12].

Hab. North America, in Texas near the Mexican border [4].—Mexico [6 11] (*Sallé, ex coll. Sturm*), San Luis Potosi (*Dr. Palmer*), Villa Lerdo in Durango (*Flohr* [12], *Höge*), Aguas Calientes city, Zapotlan in Colima, Sayula in Jalisco, Guadalajara, Tacambaro, Matamoros Izucar, Esperanza, Perote, Almolonga (*Höge*), Mexico city [10] (*Dr. Palmer*, *Dugès* [7], *Höge*), Morelia [3], Guanajuato [3], El Puente [7 10] (*Dugès*), Toluca, Orizaba [1 2], Vera Cruz [3] (*Sallé*).

An extremely variable and abundant insect in Mexico, but not extending south of the State of Vera Cruz, and only just passing the northern frontier. The males have joints 4–7 of the antennæ thickened, the last dorsal segment (or pygidium) prolonged in the middle, and the fifth and sixth ventral segments emarginate, the latter very deeply triangularly so, with the lateral portions considerably produced.

The dorsal process of the male varies not only in width but in shape also: in the specimens from Orizaba, Esperanza, &c. it is acutely dilated on either side at the apex (fig. 14 *a*), and in those from Villa Lerdo it is slightly rounded and not at all dilated at the apex (fig. 15 *a*); but amongst the long series from San Luis Potosi &c. numerous intermediate forms are to be found, so that no importance can be attached to this as a specific character. The Villa Lerdo specimens have the elytra black, with a common median fascia, the sides, base, and apex yellow; in about one-fourth of them the elytra are entirely black. The San Luis specimens are intermediate as regards the

amount of black upon the elytra between those from Villa Lerdo and those from Orizaba; in two examples (from Orizaba and Tacambaro) the elytra are entirely yellow. We have received about 200 specimens, including large series from Villa Lerdo, San Luis Potosi, Esperanza, Mexico city, and Zapotlan. In two (? aberrant) females from Villa Lerdo the sixth ventral segment (instead of being rounded at the tip and entire) is divided in the middle.

C. alemani, Dugès, seems to be based upon a pallid variety with the thorax smoother than usual. We figure a typical male (=*fasciolata*, Jimenez) from Orizaba (fig. 14); and a male (fig. 15) and a female (fig. 16) of the var. *bifasciata*, Sturm, the former from Villa Lerdo, the latter from Toluca.

6. **Cantharis corallifera.** (Tab. XX. figg. 17, ♂; 17 *a*, sixth ventral segment, ♂.)

Lytta corallifera, Haag, Berl. ent. Zeitschr. 1880, p. 35[1]; Sturm, Cat. p. 174[2].

Hab. Mexico[1 2] (*Sallé, ex coll. Sturm; coll. F. Bates*), Sierra de San Miguelito (*Dr. Palmer*).

"Elongata, nigra, nitida, macula frontali, margine posteriore capitis, lateribus thoracis femoribusque rufo-sanguineis, elytris reticulatis, humeris fere lævibus; subtus opaca.—Long. 19–25, lat. 7–9 millim."

Four examples of this species are before me, all males. In this sex, joints 4–6 of the antennæ are moderately thickened; the basal joint of the middle tarsi is slender; the fifth ventral segment is broadly, deeply emarginate; and the sixth segment is very deeply, circularly excised at the apex, the excision extending to beyond the middle of the segment. The elytra (as in the allied *C. magister*, Horn, from Arizona, &c.) are very coarsely reticulated.

In the specimens we have received the femora are black at the base and apex. The outer spur of the hind tibiæ is stout, the inner one acute. In the form of the sixth ventral segment in the male *C. corallifera* approaches *C. cribrata*, Lec.

7. **Cantharis intricata.** (Tab. XX. figg. 18, ♂; 18 *a*, sixth ventral segment, ♂.)

Elongate, rather broad, black, a large patch between the eyes and the sides of the prothorax to a greater or less extent reddish-yellow, the head and prothorax shining, the elytra opaque. Head with a few very widely scattered fine punctures, the eyes large; antennæ stout, moderately long in the male, shorter in the female, thickening a little towards the tip, the outer joints ovate; prothorax broader than long, strongly rounded at the sides anteriorly and narrowed behind, with an interrupted median groove and a broad shallow depression on either side of the disc about the middle, the surface with a few very widely scattered fine punctures; elytra about twice as wide as the prothorax, closely and rather finely reticulate; beneath opaque, thickly and finely punctured, the metasternum pubescent; the outer spur of the hind tibiæ broad, spoon-shaped, the inner one slender.

♂. Antennæ with joints 4–6 slightly thickened; fifth ventral segment broadly, the sixth segment triangularly, emarginate.

Length 16–22, breadth 5–7 millim. (♂ ♀.)

Hab. Mexico, Villa Lerdo in Durango (*Höge*).

This species agrees very closely with Dr. Horn's description of *C. cribata*, Lec., from Texas, but has different male-characters. In *C. cribrata*, ♂, the sixth ventral segment is semicircularly notched, and the intermediate joints of the antennæ are not thickened. *C. intricata* is closely allied to *C. corallifera*, but may easily be known from it by the much finer reticulation of the elytra, the entirely black legs, the black head (the intraocular spot excepted), and the very different form of the sixth ventral segment in the male. Numerous examples.

8. **Cantharis sanguinea.** (Tab. XX. figg. 19, ♂; 19 *a*, sixth ventral segment, ♂.)

Lytta sanguinea, Haag, Berl. ent. Zeitschr. 1880, p. 35 [1].

Hab. Mexico (*coll. Haag* [1]), Mochitlan in Guerrero (*Baron*).

"Tota rufa, elytris pallidioribus, antennarum apice marginibusque segmentorum nigris; capite thoraceque canaliculatis, sparsim punctatis; elytris dense diffuse ruguloso-punctatis, nervatis; pectore pedibusque breviter flavo-pilosis.—Long. 27, lat. 7½ millim. (cap. exc.)."

We are indebted to Mr. Harford for a male example of this species. *C. sanguinea* approaches *C. erythrothorax* &c., but has joints 4–6 of the male antennæ merely thickened. The male also has the basal joint of the middle tarsi strongly dilated on the inner side, concave beneath; the fifth ventral segment unemarginate; and the sixth segment depressed and smooth in the middle, and feebly emarginate at the apex. The elytra are rather coarsely scabrous-punctate, with three well-marked raised lines or costæ. The thorax is as long as broad, the disc deeply transversely depressed before the middle. The outer spur of the hind tibiæ is very stout, the inner one slender. Haag's description [1] was made from a single (female) example.

9. **Cantharis erebea.** (Tab. XX. figg. 20, ♂; 20 *a*, sixth ventral segment, ♂.)

Elongate, black, a small fulvous spot between the eyes excepted, moderately shining, the elytra opaque. Head with a few very widely scattered fine punctures, the occiput impressed in the middle and more coarsely and closely punctate, the eyes rather small; antennæ moderately elongate, gradually thickening outwardly, the outer joints oblong-ovate, the eleventh very much longer than the tenth; prothorax as long as broad, rather convex, subquadrate, the sides rounded in front, the disc transversely depressed before the base, and with an interrupted median groove and a deep fovea on either side a little behind the middle, the surface with a few very widely scattered fine punctures; elytra elongate, finely scabrous-punctate, and with two very faint raised lines on the disc; beneath shining, very sparsely, finely punctate, the metasternum sparsely pubescent; outer spur of the hind tibiæ very broad, truncate at the tip, the inner one acute.

♂. Antennæ with joints 4–7 dilated and thickened, the fifth strongly so; the middle tibiæ distorted and compressed towards the tip; the basal joint of the middle tarsi thickened; the sixth ventral segment depressed and smooth in the middle and very feebly emarginate at the apex; the last dorsal segment broadly rounded at the tip.

Length 19–25 millim. (♂ ♀.)

Hab. Mexico (*Sallé*), Huetamo in Michoacan (*Höge*).

Four examples, one only of which is of the male sex. This insect nearly agrees with Dr. Horn's description of *C. melæna*, Lec. (Proc. Am. Phil. Soc. xiii. p. 105), from Sonora and Arizona; but *C. melæna*, ♂, has the last dorsal segment acutely oval at tip, and the sixth ventral segment deeply emarginate.

10. **Cantharis ebenina.**

Cantharis ebenina (Chevr.), Dugès, La Naturaleza, iv. p. 66, t. 2. figg. 10, 10 *a–c* (1877)[1]; An. Mus. Michoacano, ii. p. 103[2].

Lytta ebenina (Chevr.), Dej. Cat. 3rd edit. p. 246[3].

Hab. Mexico[3] (*Boucard*[1]), State of Vera Cruz (*Boucard*[2]), Boca del Monte (*Flohr*[2]), Matamoros Izucar, San Andres Tuxtla (*Sallé*), Esperanza (*Höge*).

Found in abundance by Herr Höge at Esperanza. This insect is of a uniform dull black colour; the head and thorax are very finely, sparsely, irregularly punctate, the disc of the latter almost smooth; the elytra are very finely scabrous-punctate; the outer spur of the hind tibiæ is moderately stout, the inner one slender. The male has joints 4–6 of the antennæ a little thickened and the sixth ventral segment feebly emarginate.

C. ebenina is closely allied to *C. tenebrosa*, Lec., from California, but is smaller and less elongate, and has the head and thorax much more finely punctured and the elytra smoother; the sixth ventral segment is feebly emarginate in the male in both species. Varies in length from 7–15 millim.

11. **Cantharis plumbea.**

Lytta plumbea (Klug), Haag, Berl. ent. Zeitschr. 1880, p. 38[1].

Hab. Mexico (*coll. Haag*[1]), Canelas in Durango (*Becker*).

"Elongata, opaca, obscure ænescens; capite dense punctato, postice canaliculato; thorax rugulis minutissimis opaco, sat grosse punctato, antice posticeque impresso, canaliculato, utrinque fovea distincta impressa; elytris latis, humeris distinctis, rugulosis. Long. 12–13, lat. 4–4½ millim."

Six examples from Durango agree very nearly with this diagnosis. They are dull black, with a slight brassy lustre; the head and thorax coarsely, rugosely punctate, the latter transverse, somewhat rounded at the sides, transversely depressed anteriorly, and with a depression on either side of the disc behind; the elytra finely scabrous-punctate, flattened on the disc, and vaguely sulcate towards the base; the antennæ stout, with joints 4–6 a little thickened in the male; the outer spur of the hind tibiæ moderately stout, the inner one slender. The male has the fifth ventral segment broadly and shallowly, the sixth very deeply, emarginate.

12. **Cantharis bipuncticollis.** (Tab. XX. figg. 21, ♂; 21 *a*, sixth ventral segment, ♂.)

Lytta bipuncticollis (Chevr.), Haag, Berl. ent. Zeitschr. 1880, p. 36[1].

Hab. Mexico, Mochitlan in Guerrero (*Baron*), Amula in Guerrero (*H. H. Smith*), Jalapa (*Höge*), Cordova, Oaxaca (*Sallé*).

Of this species, the locality for which is not mentioned by its describer [1], we have received fifteen examples. The head is black or bronze-black, the thorax reddish-yellow, with a small black spot on either side of the middle of the disc, the elytra cyaneous or green. The head and thorax are shining, very sparsely, finely punctate, the latter transverse, rounded at the sides, more or less distinctly canaliculate, and transversely depressed in front; the elytra are finely scabrous-punctate; the antennæ are short and stout, with submoniliform joints, the fourth and fifth thickened in the male; the outer spur of the hind tibiæ is stout, the inner one slender. The sixth ventral segment is very deeply, the fifth broadly and arcuately, emarginate in the male. Varies in length from 10–17 millim. A specimen from Jalapa is figured.

13. Cantharis koltzei.

Lytta koltzei, Haag, Berl. ent. Zeitschr. 1880, p. 38 (excl. var. *cyanescens*) [1].
Cantharis monilicornis, Dugès, La Naturaleza, v. p. 142, t. 4. figg. 3, 3 *a*, *b* (1881) [2]; An. Mus. Michoacano, ii. p. 96 (excl. var.) [3].

Hab. Mexico, Uruapan [2 3], Moroleon [3], and Valley of Mexico [3] (*Dugès*), Mexico city (*Dr. Palmer*), Guanajuato, Toluca (*Sallé*); Panama (*coll. Haag* [1]).

Both Haag and Dugès seem to have confused two closely allied species under one name; the variety they mention differs constantly from the type in the very much more deeply emarginate sixth ventral segment in the male.

In *C. koltzei*, ♂, the sixth ventral segment is depressed in the middle and rather deeply triangularly emarginate; the fifth segment is feebly emarginate; and joints 4–6 of the antennæ are thickened. *C. koltzei* also has the head and thorax duller and more closely punctured, the thorax more transverse. Dugès [3] gives the colour as black, Haag [1] as "ænescent." The six specimens before me (four ♀ and two ♂, including one named by Dugès) have a faint violaceous lustre.

Both species occur in the vicinity of the city of Mexico.

14. Cantharis cyanescens.

Lytta koltzei, var. *cyanescens* (Dej.), Haag, Berl. ent. Zeitschr. 1880, p. 38 [1].
Lytta cyanescens, Dej. Cat. 3rd edit. p. 246 [2].
Cantharis monilicornis, var., Dugès, An. Mus. Michoacano, ii. p. 97 [3].

Hab. Mexico [1 2] (*coll. F. Bates*), Quiroga (*Dugès* [3]), Esperanza, Mexico city (*Höge*).

In the male of this insect the sixth ventral segment is very deeply emarginate (the emargination extending to three-fourths the length of the segment), with the lateral processes considerably prolonged; the fifth segment is deeply arcuate-emarginate; and

joints 4–6 of the antennæ are slightly thickened. *C. cyanescens* also differs from *C. koltzei* by its cyaneous or greenish colour, and by the more shining, less closely punctured head and thorax, the latter less transverse. Six males and two females of *C. cyanescens* are before me.

15. Cantharis humilis.

Lytta humilis, Haag, Berl. ent. Zeitschr. 1880, p. 39 [1].

Hab. Panama (*coll. Haag* [1]).

"Elongata, opaca, cyanescens vel ænescens, interdum brunnescens; capite thoraceque rude punctato, hoc transversim ruguloso, antice posticeque impresso; elytris elongatis, attenuatis, rugulosis, pilis decumbentibus albidis tectis. Long. 8–10, lat. 2–2½ millim."

This species is said to be closely allied to *C. koltzei*; we have not received a specimen of it. Apparently described from a single female example.

16. Cantharis subviolacea.

Cantharis augusti, Deyr. in litt.

Moderately elongate, obscure violaceous, the head and prothorax of a more æneous tint, sparsely pubescent, shining, the elytra opaque. Head sparsely, rather coarsely punctate, the eyes large; antennæ short and stout in both sexes, thickening outwardly, the joints moniliform; prothorax transverse, narrowed before and behind, canaliculate in the middle, the sides, base, and apex very sparsely and rather coarsely punctate, the disc almost smooth; elytra finely scabrous-punctate; beneath sparsely, finely punctured; the outer spur of the hind tibiæ stout, the inner one slender.

♂. Antennæ with joints 4 and 5 a little thickened; sixth ventral segment very deeply, subtriangularly emarginate.

Length 7–15 millim. (♂ ♀.)

Hab. Mexico, Parada, Duraznal (*Sallé* [1]).

One male and three female examples. This is the species mentioned by Haag, Berl. ent. Zeitschr. 1880, p. 38, nota, under the name of *Lytta variabilis*, Dugès, var. *augusti*, Deyr. *C. subviolacea*, however, has the sixth ventral segment very deeply emarginate and the fourth and fifth antennal joints slightly thickened in the male. It also differs from *C. variabilis* in the much more finely and sparsely punctured head and thorax, and in its violaceous colour.

17. Cantharis biguttata.

Lytta biguttata, Lec. Proc. Acad. Phil. vi. p. 332 [1].

Cantharis biguttata, Horn, Proc. Am. Phil. Soc. xiii. p. 109 [2].

Cantharis bivirgata, Dugès, La Naturaleza, v. p. 140, t. 4. figg. 2, 2 A–J, 2 *a–i* [3].

Cantharis alfredi, Dugès, An. Mus. Michoacano, ii. p. 98 [4].

Hab. North America, New Mexico [1 2], Arizona [2].—Mexico, Villa Lerdo in Durango (*Höge*), Silao [3 4] and Tupataro [4] in Guanajuato (*Dugès*), Guanajuato (*Sallé*).

In the typical form of this variable species the elytra have each an oval spot at about

one-fourth from the apex. In some of the Guanajuato specimens, several of which are before me, this spot is replaced by two longitudinal streaks (as shown in Dugès's figures 2 and 2 G); in one from Villa Lerdo, obtained with the typical North-American form, the elytra are black, with the sides anteriorly and the apex yellow (as in Dugès's figure 2 J). In the male, joints 4–6 of the antennæ are moderately thickened, the fifth ventral segment is broadly, feebly emarginate, and the sixth segment is very deeply, triangularly emarginate, the apex acutely produced on either side (as in Dugès's figure 2 *g*). An abundant insect in New Mexico and Arizona, according to Dr. Horn [2].

18. **Cantharis scitula.** (Tab. XX. figg. 25, ♂; 25 *a*, sixth ventral segment, ♂.)

Moderately elongate, brassy-black, the elytra with the lateral margin and a broad median vitta extending from the base nearly to the apex yellow, the tibiæ and tarsi in part, and a spot on the hind femora, testaceous; sparsely and rather coarsely pubescent, shining. Head sparsely, coarsely punctate; antennæ rather short, the outer joints oblong-ovate; prothorax subcampanulate, almost parallel at the sides behind, fully as long as broad, transversely depressed before the middle, feebly emarginate in the centre at the base, sparsely, coarsely, irregularly punctate, a longitudinal space in the middle impunctate; elytra rather coarsely scabrous-punctate; beneath æneous, thickly punctured, the outer spur of the hind tibiæ broad, the inner one slender.

♂. Antennæ with joints 4 and 5 thickened; fifth ventral segment broadly and shallowly, the sixth segment deeply and subtriangularly, emarginate.

Length 8 millim. (♂.)

Hab. Mexico, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

One example. Easily distinguishable from all the other species here recorded by the vittate elytra.

19. **Cantharis signaticollis.** (Tab. XX. figg. 24, ♂; 24 *a*, sixth ventral segment, ♂.)

Moderately elongate, black or pitchy-brown, the prothorax with an ill-defined patch on the middle of the disc in front and sometimes the sides also anteriorly, a small lateral spot excepted, reddish-yellow, the sides of the elytra anteriorly and a spot between the eyes sometimes of the same colour; somewhat thickly and coarsely pubescent, shining, the elytra subopaque. Head coarsely and rather thickly punctured; antennæ moderately long in the male, shorter in the female, the outer joints oblong-ovate; prothorax convex, almost as long as broad, emarginate in the centre at the base, transversely flattened anteriorly, rounded at the sides in front, almost parallel behind, sparsely, coarsely punctate, the disc with a smooth space on either side of the middle; elytra finely scabrous-punctate, and with two faint raised lines on the disc; beneath thickly punctured and pubescent; outer spur of the hind tibiæ broad, obliquely truncate at the tip, the inner one acute.

♂. Antennæ with joints 4 and 5 flattened and dilated, 6 a little stouter than 7; fifth ventral segment broadly arcuately emarginate, the sixth segment very deeply triangularly emarginate, with sharp lateral processes.

Length $8\frac{1}{2}$–$10\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Matamoros Izucar (*Sallé, Höge*).

Four examples, two of each sex. This species closely resembles *C. proteus*, Haag (=*sobrina*, Dugès), which occurs at the same locality; but differs from it in the more distinctly emarginate base of the thorax, and in the dilated fourth and fifth antennal

joints in the male. The longer antennæ in both sexes and the less transverse thorax distinguish it from *C. variabilis*, Dugès, apart from the different male-characters; and the coarsely punctured head and thorax &c. separate it from *C. michoacanæ*, *C. biguttata*, &c. The thorax in two specimens shows traces of four spots in a transverse line across the middle, a system of coloration not visible in any of the varietal forms of *C. proteus* or *C. variabilis*.

20. **Cantharis variabilis.**

Cantharis variabilis, Dugès, La Naturaleza, i. p. 111, t. 1. figg. 11, c^1–c^6 (1869) [1]; An. Mus. Michoacano, ii. p. 107 [2].

Lydus coracinus, Sturm, Cat. p. 173 [3].

Hab. Mexico [3] (*Sallé, ex coll. Sturm*), San Luis Potosi (*Dr. Palmer*), Guanajuato (*Dugés* [1 2], *Sallé*), Tupataro (*Dugès* [2]).

A variety of this species with the thorax reddish-yellow with two black spots on the disc occurs at Guanajuato, the thorax in the typical form being entirely black: copulated specimens of the two forms have been received by us from M. Sallé. The head and thorax are coarsely punctured, the latter transverse, rounded at the sides anteriorly, feebly emarginate in the centre at the base, obsoletely canaliculate, and with a smooth bare spot on either side of the disc at the middle; the elytra are finely scabrous-punctate; the antennæ are comparatively short, gradually thickened outwardly in both sexes, the joints moniliform; the outer spur of the hind tibiæ is very stout, the inner one acute. The male has the sixth ventral segment very feebly emarginate. *C. variabilis* is possibly synonymous with *C. puberula*, Lec., as noted by Dr. Horn (Trans. Am. Ent. Soc. xii. p. 107); but till the male of Leconte's species is discovered it is impossible to speak with certainty. *C. variabilis* is the only one of several allied Mexican forms to which Leconte's description will apply.

21. **Cantharis michoacanæ.**

Moderately elongate, brassy-black, the prothorax reddish-yellow with a small black spot on either side of the middle of the disc, sparsely pubescent, shining, the elytra opaque. Head very sparsely, coarsely punctate, the eyes large; antennæ rather short, thickening outwardly in both sexes, the outer joints ovate; prothorax as long as broad, emarginate in the centre at the base, the sides rounded in front and almost parallel behind, the disc transversely depressed anteriorly, the surface very sparsely punctured; elytra finely scabrous-punctate; beneath somewhat thickly punctured; the outer spur of the hind tibiæ moderately stout, the inner one acute.

♂. Sixth ventral segment feebly emarginate.

Length 6–9½ millim. (♂ ♀.)

Hab. Mexico, Huetamo and Tacambaro in Michoacan (*Höge*).

Twelve examples. This small species approaches *C. bipuncticollis*, from which it differs in its blacker elytra, less elongate shape, and smaller size, as well as by the male-characters. From the similarly-coloured variety of *C. variabilis*, Dugès, its much more

sparsely and finely punctured head and thorax, the latter being more elongate, distinguish it at a glance. In the emarginate base of the thorax it resembles *C. biguttata*.

22. **Cantharis proteus.** (Tab. XX. figg. 22, 23, ♂, varr.; 22 *a*, sixth ventral segment, ♂.)

Lytta proteus, Haag, Berl. ent. Zeitschr. 1880, p. 37 [1].

Cantharis sobrina, Dugès, La Naturaleza, v. p. 143, t. 4. figg. 6, 6 *a–f* * (1881) [2]; An. Mus. Michoacano, ii. p. 97 [3].

Cantharis bipartita, Dugès, An. Mus. Michoacano, ii. p. 106 [4].

Hab. Mexico [1], Pénjamo in Guanajuato (*Sallé*, *Dugès*), Gardidueña (*Dugès* [3]), Chilpancingo (*Flohr*, *Höge*, *H. H. Smith*), Tierra Colorada, Acaguizotla, Hacienda de la Imagen, Venta de Pelegrino, all in Guerrero (*H. H. Smith*), Tonila in Colima, Tacambaro in Michoacan, Mexico city (*Höge*), Matamoros Izucar (*Sallé*, *Höge*).

We have received about seventy examples of this variable species, including a pair still "in copula" from Herr Höge (from Matamoros Izucar), whereof the male belongs to *C. sobrina* and the female to *C. bipartita*, Dugès. Haag [1] enumerates five colour-varieties of this insect, specimens of all of which are before me, including some determined by himself; these are as follows:—(1) Tota nigra, interdum obscure ænescens, puncto capitis rufo (=*sobrina*, Dugès); (2) Thorace rufo, bipunctato; (3) Capite rufo, ante oculos nigro-bipunctato, thorace rufo, bipunctato; elytris rufis, apice nigris (=*bipartita*, Dugès); (4) Idem, sed capitis nigrescente, rufo-punctato; (5) Idem, sed humeris solis rufis. The head and thorax are coarsely punctured, the latter as long as broad and with a smooth spot on either side of the disc about the middle; the antennæ are gradually thickened to the tip in both sexes, moderately long in the male, shorter in the female; the elytra are rather coarsely scabrous-punctate; the outer spur of the hind tibiæ is broad, the inner one slender. In the male the fifth ventral segment is broadly, and the sixth segment very deeply and acutely, emarginate, the lateral processes of the sixth elongate.

We figure two varieties, of which one (fig. 23) belongs to *C. bipartita*, Dugès.

23. **Cantharis gentilis.**

Cantharis gentilis, Horn, Trans. Am. Ent. Soc. x. p. 311 [1].

Hab. North America, New Mexico and Arizona [1].—Mexico, Canelas in Durango (*Becker*).

A large, glossy-black species, with the elytra minutely, comparatively sparsely punc-

* In Dugès's figures (6 *e* and 6 *f*) the sexes are reversed.

tate, with intermixed larger punctures; the head is sparsely, finely punctate; the thorax is rather broader than long, subquadrate, deeply transversely depressed in the middle behind and shallowly so in front, and finely punctured at the sides, base, and apex; the antennæ are short and stout, and thickened outwardly in both sexes; the spurs of the hind tibiæ are very slender, subequal, and yellow in colour. The male has a single spur to the anterior tibiæ, and the sixth ventral segment crescentically depressed and triangularly emarginate.

We have received a pair of this remarkable species from Mr. Becker.

24. **Cantharis atrovirens.**

Cantharis atrovirens, Dugès, An. Mus. Michoacano, ii. p. 104[1].

Hab. Mexico (*Flohr*[1]).

Unknown to me. "Black, with metallic-green reflections; head covered with minute erosions; antennæ gradually thickening outwardly; thorax subcampanulate, sculptured like the head; elytra strongly granulose; outer spur of the hind tibiæ lanciform." Described from a single female example. The only other Mexican species of the genus with a slender outer spur to the hind tibiæ is *C. gentilis.*

25. **Cantharis sanguineoguttata.** (Tab. XX. figg. 26, ♂, var.; 26 *a*, pygidium, 26 *b*, sixth ventral segment, of ditto; 27, ♀.)

Lytta sanguineoguttata, Haag, Berl. ent. Zeitschr. 1880, p. 40[1].

Hab. Guatemala (*coll. Haag and mus. Vindob.*[1]; *Sallé*), Calderas (*Champion*), Chimaltenango, Tepan (*Conradt*).

A narrow, elongate species, of an obscure violaceous, green, or æneous colour, the thorax with a rufous lateral patch, which is often obsolete; the legs and antennæ elongate. The thorax is shining, impunctate, longer than broad, the sides obliquely converging from the middle forwards; the elytra are very finely scabrous-punctate; the hind tibial spurs are slender, equal. The male possesses extraordinary characters, which were mostly overlooked by Haag:—antennæ with joints 4–7 greatly elongated; anterior and posterior trochanters with a slender acute spine on their lower face; first joint of the middle tarsi with a long, slender tooth on the inner side at the base, this tooth placed at right angles to the joint; last dorsal segment (or pygidium) with an elongate process in the middle at the apex, this process triangularly dilated at the tip, the apex of the segment semicircularly excised on either side of it; sixth ventral segment very broadly and deeply excavate from the middle to the apex, deeply triangularly emarginate. In the female the antennæ are very gradually thickened outwardly, joints 4–10 slightly decreasing in length.

Of the eight specimens received, three only have the thorax rufous laterally; these vary in length from 7–18 millim., exclusive of the abdomen (Haag gives 15–24 millim.).

SUPPLEMENT.

STATIRA (p. 3).

40 (A). **Statira pilifera.**

♂. Elongate, obscure rufo-testaceous, the elytra reddish-brown with an æneous lustre, the upper surface moderately shining, the legs, antennæ, and under surface rufo-testaceous; the elytra clothed with very long, erect hairs. Head finely, sparsely punctate, almost smooth in front, the eyes very large, rather narrowly separated; antennæ moderately long (apical joint broken off); prothorax as long as broad, completely margined at the sides, the sides somewhat obliquely converging in front, the anterior angles obtuse but distinct, the surface rather densely, very irregularly, minutely punctured; elytra elongate, moderately deeply striate, the striæ with very fine, extremely closely placed, transverse punctures, the interstices slightly convex, the first with a single row, the third, fifth, seventh, and ninth each with a double row of rather closely placed, deep, setiferous punctures which extend from the base to the apex, the fourth, sixth, and eighth interstices also with four or five setiferous punctures towards the apex; beneath almost smooth; legs elongate, rather slender, the femora glabrous on their inner edge.

Length $10\frac{1}{4}$, breadth 3 millim.

Hab. MEXICO, Cerro de Plumas (*Flohr*).

One specimen. Allied to *S. alternans*, but easily distinguishable from it by the longer and more shining thorax, and the more numerous setiferous impressions on the elytra, these being arranged in double rows on each of the alternate interstices, the first excepted. *S. pilifera* somewhat resembles *S. cribrata* and *S. ciliata*, but it has the thorax completely margined at the sides and the legs without long hairs.

41 (A). **Statira spiculifera.** (Tab. XXI. fig. 3, ♂.)

♂. Elongate, the head and prothorax dull, ferruginous, the elytra shining, obscure ferruginous, with the sides brilliant metallic green, the antennæ, legs, and under surface reddish-testaceous. Head finely and rather densely punctured, almost smooth in front, the eyes very large; antennæ moderately long, not very slender, the apical joint nearly equalling joints 6–10 united; prothorax as long as broad, completely margined at the sides, the sides somewhat obliquely converging in front, the anterior angles rounded, the hind angles acute, the surface very finely scabrous, smoother towards the sides and base; elytra elongate, rather deeply striate, the striæ with very fine, extremely closely placed, subtransverse punctures, the first, third, and fifth interstices each with a row of from fifteen to twenty, the seventh and ninth each with about ten, rather coarse, deep punctures, which extend from the base to the apex and are each preceded by a feeble elevation, these elevations becoming more distinct towards the sides; legs moderately stout; hind femora sinuate on their inner edge, densely ciliate towards the base; hind tibiæ sinuate.

Length 10, breadth $3\frac{1}{4}$ millim.

Hab. MEXICO, Motzorongo in Vera Cruz (*Flohr*).

One specimen. Allied to *S. tuberosa* and *S. nodulosa*, but less elongate, with the

legs shorter and stouter, the thorax not so smooth, the elytra more shining, &c. The elytral sculpture resembles that of *S. nodulosa*, but the punctures of the alternate interstices do not bear long, erect hairs.

63 (A). **Statira flohri.**

Moderately elongate, rather depressed, very shining, piceous or pitchy brown, the head and the base and apex of the prothorax ferruginous in one example, the elytra metallic green, æneous or cupreo-æneous at the tip. Head very finely, sparsely punctured, the eyes comparatively small and very widely separated in the female, larger in the male; antennæ rufo-testaceous, long, very slender, thickening outwardly, the apical joint in the female about three times as long as the preceding one (in the male broken off); prothorax as long as broad, very finely margined at the sides, the latter a little rounded anteriorly, the anterior angles obtuse, the disc transversely depressed on either side behind the middle, the surface very finely, sparsely punctured; elytra moderately long, transversely depressed below the base, finely and rather deeply striate, the striæ with exceedingly closely placed fine punctures, the interstices almost flat, the first with four (near the apex), the third, fifth, seventh, and ninth each with from six to eight (widely scattered) rather fine punctures; beneath almost smooth: legs long and slender, pitchy-brown, the tarsi paler, the femora and tibiæ with a few very long, scattered, projecting hairs.

Length 9–10, breadth 3–3⅓ millim. (♂ ♀.)

Hab. Mexico, Juquila (*Flohr*).

Two specimens, the male with mutilated antennæ. This species resembles *S. ærata*, but it has longer and much more slender antennæ, smaller eyes, &c The femora and tibiæ bear a few very long projecting hairs, and *S. flohri*, following the arrangement here adopted, should be placed near *S. pilipes* and its allies, from all of which it differs in the completely margined thorax. The long hairs on the femora and tibiæ are easily abraded.

Mr Flohr informs me that he has also met with this insect at Cerro de Plumas.

ANISOXYA. (To follow the genus *Dircœa*, p. 85.)

Anisoxya, Mulsant, Col. Fr., Barbipalpes, p. 45 (1856); Lacordaire, Gen. Col. v. p. 551.

Two species only of this genus are known, both of rare occurrence, one from Europe and one from North America; a third is now added from Mexico.

1. **Anisoxya vagans.**

Piceous, thickly clothed with fine decumbent greyish pubescence; the entire upper surface densely, minutely punctate and transversely aciculate. Palpi obscure testaceous, the last joint of the maxillary pair moderately stout, subtriangular; antennæ short, about reaching the base of the prothorax, black, with joints 1 and 2 testaceous, these joints stout and subequal, 3 narrower and a little shorter than 2, 4–11 broader, 6–10 transverse, 11 much longer than 10, oval; prothorax broader than long, rapidly narrowing from about the basal third, bisinuate at the base; legs fusco-testaceous, the apical joint of the tarsi yellow; the spurs of the middle tibiæ much longer than those of the hind tibiæ, unequal, the inner one very elongate; penultimate joint of all the tarsi very short and narrow, slightly produced beneath the apical joint.

Length 4 millim.

Hab. Mexico, Yolos in Oaxaca (*Sallé*).

One specimen. This insect nearly agrees with the description of the North-American *A. glaucula*, Lec., except as regards the form and colour of the antennæ and the stronger bisinuation of the base of the thorax. The antennæ are much shorter than in the European *A. fuscula*.

CANIFA (p. 90).

2 (A). **Canifa brevicollis.**

♀. Elongate, narrowing posteriorly, above and beneath (the eyes excepted), antennæ, and legs flavo-testaceous; sparsely pubescent, moderately shining. Head densely punctured; the eyes very large, the antennary orbits extending two-thirds of the distance across them; antennæ moderately long, joint 3 one-half longer than 2; prothorax nearly twice as broad at the base as long, very densely punctured, feebly bisinuate at the base, without distinct basal foveæ; elytra narrowing from a little before the middle to the apex, closely, moderately coarsely punctured.

Length (with the head extended) 4 millim.

Hab. Mexico, Frontera in Tabasco (*Höge*).

One specimen. Allied to *C. oculata*, but differing from that insect in the much shorter, more densely punctured thorax. Larger than *C. circumdata*, the elytra not so coarsely punctured, the thorax and elytra almost unicolorous. As in *C. oculata*, the elytra appear to be slightly darker towards the sides behind.

LECONTIA.

Crymodes (Lec.), huj. op. p. 104 (nomen præocc.).

1. **Lecontia discicollis.**

Crymodes discicollis (Lec.), huj. op. p. 104.

Mr. Flohr has sent us an additional specimen of this insect from the Sierra Madre in Durango; the species therefore is undoubtedly Mexican.

MICROTONUS (p. 113).

Microtonus figuratus (p. 114).

To the Mexican locality given, add:—Bosque de Pacho near Jalapa (*Flohr*).

Mr. Flohr informs me that this insect is found upon oak trees.

1 (A). **Microtonus sticticopterus.** (Tab. XXI. fig. 4.)

Moderately elongate, comparatively broad, opaque; fuscous, the head ferruginous in front, the prothorax testaceous at the base; the elytra with two broad interrupted fasciæ—one a little below the base, the other slightly beyond the middle, each formed by partly confluent longitudinal streaks, and the anterior one almost enclosing three oblong spots,—and some irregular oblong streaks towards the apex, testaceous; beneath fusco-testaceous; legs fuscous, with the tarsi testaceous; antennæ and oral organs testaceous; the head and prothorax in part, and the light markings on the elytra, clothed with yellowish pubescence, the pubescence on the rest of the upper surface indistinct; the entire upper surface very densely and

finely punctured, the punctures on the elytra scarcely coarser than those on the prothorax. Head with a deep frontal suture, the eyes small; antennæ moderately elongate, very slender; prothorax transverse, much broader at the base than at the apex, with the sides rounded anteriorly and sinuate behind, the hind angles acute and directed outwards; legs very slender, the first joint of the hind tarsi much longer than the other joints united.

Length $2\frac{3}{4}$ millim. (♀.)

Hab. Mexico, Zacualtipan in Hidalgo (*Höge*).

One specimen. Closely allied to *M. figuratus*, but differing from the three examples of that insect before me in having the anterior fascia of the elytra more interrupted—formed by four partly confluent longitudinal streaks on each elytron, and nearly enclosing three oblong spots; it also has the eyes smaller, and the antennæ shorter and more slender.

1 (b). **Microtonus trifasciatus.** (Tab. XXI. fig. 2.)

Moderately elongate, rather convex, opaque; the head ferruginous; the prothorax pitchy-brown or fusco-ferruginous, with the sides broadly and indeterminately paler; the elytra each with a broad oblique fascia below the base and two narrower, interrupted, partly confluent oblique fasciæ beyond the middle testaceous, these markings not reaching the suture or lateral margin, for the rest piceous or black; the antennæ, oral organs, and legs, the femora and apices of the tibiæ excepted, testaceous; the under surface piceous; the entire upper surface exceedingly densely punctured, the punctures on the elytra much deeper and coarser than those on the prothorax; the head and prothorax and the light-coloured portions of the elytra rather thickly clothed with yellowish-cinereous pubescence, the pubescence on the dark portions of the elytra indistinct, that on the prothorax variegate. Head with a well-defined frontal suture, the eyes rather small; antennæ very slender, moderately elongate; prothorax transverse, much broader at the base than at the apex, with the sides rounded anteriorly and sinuate behind, the hind angles acute and directed outwards; legs very slender, the first joint of the hind tarsi much longer than the other joints united.

Length $2\frac{1}{4}$–$3\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Real del Monte 9300 feet (*Flohr*).

Six examples. Narrower than *M. figuratus*; the elytra very differently marked and much more closely punctured, the eyes smaller, the antennæ shorter and more slender, the tibiæ testaceous towards the base.

SISENES (p. 130).

Sisenes foveatus (p. 138).

To the Mexican locality given, add:—Almolonga (*Flohr*).

OXACIS (p. 149).

12 (a). **Oxacis constricticollis.** (Tab. XXI. fig. 1.)

Elongate, rather narrow, finely pubescent, luteous-yellow, the eyes and the tips of the mandibles black; the maxillary palpi piceous, with the tip of each joint testaceous; the antennæ black at the base, becoming brownish towards the tip, the extreme base of each of the joints 6–10 testaceous; the labial palpi and under surface flavo-testaceous; the coxæ and femora, the tips of the latter excepted, pallid testaceous,

the rest of the legs piceous; the head and prothorax moderately shining, the elytra opaque. Head finely, rather sparsely punctured, densely and minutely so on the vertex, smoother along the middle and in front, the front broadly depressed; eyes large, rather prominent, coarsely granulated; mandibles long and prominent, entire at the apex; last joint of the maxillary palpi elongate, cultriform; antennæ scarcely reaching to the middle of the elytra, tapering towards the tip, the apical joint constricted at the middle; prothorax longer than broad, much wider at the apex than at the base, flattened on the disc, abruptly constricted about the middle and thence to the base narrow and parallel, the sides strongly rounded anteriorly, the surface densely, minutely punctured, the disc slightly depressed in the middle before the base and with a smooth median line; elytra elongate, subparallel in their basal half, densely, shallowly, minutely punctured, with two faint raised lines on the disc; beneath densely, minutely punctured.

Length $7\frac{1}{2}$ millim.

Hab. Mexico, Atoyac in Vera Cruz (*Flohr*).

One specimen, apparently a female. This species is not very closely allied to any of the other members of the genus described in this work; it resembles *Copidita trifoveata* in colour, from which it may be known by the simple mandibles, shorter antennæ, flatter thorax, &c. The thorax is considerably dilated anteriorly, narrow and parallel behind.

23 (A). **Oxacis cærulea.** (Tab. XXI. fig. 5.)

Elongate, narrow, parallel, above and beneath cæruleous, the elytra bluish-green; the palpi (except at the tip) and the antennæ black; the legs black, with the femora bluish-green; the entire upper surface moderately shining, sparsely clothed with rather coarse ashy pubescence. Head densely punctured, coarsely so between the eyes, the latter only moderately prominent and not very coarsely granulated; mandibles long and prominent, entire and almost pointed at the tip; last joint of the maxillary palpi long and cultriform; antennæ elongate, fully reaching the middle of the elytra; prothorax longer than broad, rather narrow, slightly wider in front than at the base, the sides a little rounded anteriorly and gradually converging from about the middle to the base, the entire surface densely, somewhat coarsely punctured, the disc without distinct depression or median line; elytra parallel to beyond the middle, densely, confluently punctured, the punctures a little shallower than those on the prothorax, the disc without raised lines; beneath densely and finely, the flanks of the prothorax coarsely, punctate.

Length $5\frac{2}{3}$ millim.

Hab. Mexico, Chinautla (*Flohr*). "Chiautla" on map in B.C.A., and Chinautla in Ann. Mag. Nat. Hist. and also NBS

One specimen. Allied to *O. schistacea*, Kirsch, but differing from it in the much coarser punctuation of the upper surface, and in the dark antennæ and legs. It approaches *Piras nasalis*, but has less depressed eyes, a shorter head, &c.

XYLOPHILUS (p. 166).

Since the publication of the preceding pages, Mr. Flohr has paid especial attention to this genus in Mexico, his investigations resulting in the discovery of numerous interesting new species. He informs me that all his specimens have been beaten from oak trees, especially those with large leaves. *Xylophilus*, so extraordinarily rich in species within our limits, is one of the most interesting genera that I have had to deal with in this work.

9 (A). **Xylophilus mexicanus.** (Tab. XXI. fig. 6, ♂.)

♂. Elongate, parallel, broad, robust, opaque, black, the elytra with a reddish-testaceous humeral patch; the upper surface thickly clothed with long, fine, semierect, greyish pubescence. Head very densely, finely punctate, somewhat broadly extended on either side behind the eyes, the latter very large, coarsely granulated, hairy, and rather narrowly separated; antennæ black, very hairy, exceedingly stout, almost uniform in thickness, extending to beyond the middle of the elytra, joint 2 short, about half the length of 1 and considerably shorter than 3, 3–11 more or less elongate, 3–8 increasing in length, 9 and 10 a little shorter, 11 cylindrical, exceedingly elongate, three times as long as 10; prothorax narrower than the head, as long as broad, the sides parallel behind and a little rounded in front, the disc feebly obliquely depressed on either side of the middle at the base, the surface very densely, finely punctate; elytra nearly twice as wide as, and about four times the length of, the prothorax, parallel to far beyond the middle, densely, coarsely punctate; legs black, rather stout; anterior and intermediate tibiæ abruptly bowed inwards at about one-third from the apex, the anterior pair armed with a long sharp tooth at the inner apical angle; hind tibiæ slightly curved; intermediate femora thickened on the inner side towards the tip; hind femora broadly widened, grooved along the inner side, the concavity filled with short fulvous hairs.

Length 3½ millim.

Hab. MEXICO, Tlalpam (*Flohr*).

Mr. Flohr informs me that he has only been able to secure three specimens of this fine species as yet, two males and one female. The description is taken from one of the former. The female, he says, is larger and more robust, and has shorter and stouter antennæ, and straighter tibiæ. *X. mexicanus* is allied to *X. humeralis* and *X. curvipes*; but it is much larger and very much more elongate, the eyes are less approximate (in ♂), the upper surface is more coarsely punctured, &c. The antennæ resemble those of *X. humeralis* (♂), but their apical joint is still more elongate.

This is one of several species of *Xylophilus* occurring on oaks at Tlalpam, eleven miles from the city of Mexico.

15 (A). **Xylophilus flavipalpis.** (Tab. XXI. fig. 7, ♂.)

♂. Rather short and robust, pitchy-black, shining, somewhat thickly clothed with long, moderately coarse, ashy pubescence; the antennæ pitchy-brown at the base, becoming testaceous towards the tip, the legs brownish-piceous, with the tarsi entirely flavo-testaceous, the palpi yellow; the entire upper surface densely punctured, the punctures coarse on the elytra, finer on the head and prothorax, not hidden by the pubescence. Head very large, rather narrowly extended on either side behind the eyes, the latter hairy, exceedingly large and narrowly separated; antennæ very hairy, moderately stout, not extending to the middle of the elytra, joint 3 longer than 2, 3–10 about equal in length and increasing slightly in width, longer than broad, 11 twice as long as 10, stout, ovate, obliquely acuminate; prothorax convex, nearly as long as broad, distinctly wider at the base than at the apex, the sides straight, feebly rounded in front, the disc feebly, transversely depressed on either side before the middle; elytra rather short, more than twice as wide as the prothorax, gradually narrowing from about the middle, the disc with a shallow oblique groove extending from the shoulders inwards, the suture depressed at the base; legs very hairy, moderately long; the anterior and posterior femora very stout, the intermediate pair moderately so, the hind pair unarmed; anterior tibiæ sinuous within, slightly bowed inwards at the tip, and armed with a long sharp tooth at the inner apical angle.

Length 2½ millim.

Hab. MEXICO, Jalapa (*Flohr*).

One male example. Closely allied to *X. atricolor*, from the State of Panama; but larger and broader than the male of that insect (the head and elytra wider in proportion to the width of the thorax), the head and thorax more densely punctured, the latter a little wider at the base, with the sides less parallel, the elytra obliquely depressed on the basal portion of the disc, the anterior femora stouter and the anterior tibiæ less bowed in the male.

16 (A). **Xylophilus geniculatus.** (Tab. XXI. fig. 8, ♂.)

Moderately elongate, rather broad, somewhat convex, black, shining, thickly clothed with long, ashy pubescence, the pubescence not hiding the punctuation; the palpi and antennæ pitchy-brown, the latter with joint 2 entirely, and 3 and 11 at their tips, testaceous; legs pitchy-brown, with the tibiæ testaceous at the base; the upper surface densely punctured, the punctures coarse on the elytra, finer on the head and prothorax, the head more sparsely punctate between the eyes. Head not much wider than the prothorax, narrowly extended on either side behind the eyes, the latter hairy, moderately large, separated by a space nearly equalling the width of the eye as seen from above; antennæ—(♂) moderately elongate, rather slender, joint 3 much longer than 2, 3–10 about equal in length and increasing slightly in width, longer than broad, 11 stout, twice as long as 10, ovate, obliquely acuminate—(♀) a little shorter, with the penultimate joints as broad as long and the apical one shorter; prothorax broader than long, moderately convex, the sides parallel behind, rounded in front, the disc almost unimpressed; elytra rather short, narrowing from about the middle, about twice as long as broad, without oblique groove on the disc anteriorly; legs moderately long, slender, the femora a little thickened, the hind pair stout in the male, more slender in the female; anterior tibiæ feebly sinuate within and armed with a very short, fine tooth at the inner apical angle in the male.

Length $2\frac{1}{4}$ millim. (♂ ♀.)

Hab. MEXICO, Tlalpam (*Flohr*); GUATEMALA, Quiche Mountains 8000 feet (*Champion*).

Four examples. The single (♂) specimen from Guatemala was doubtfully referred by me (*anteà*, p. 178) to *X. funereus*; from which the present species may be known by its less elongate, less parallel shape, rather more widely separated eyes, and differently coloured legs and antennæ—these organs being entirely black in *X. funereus*. The dark tarsi &c. will distinguish *X. geniculatus* from *X. atricolor* and *X. flavipalpis*.

Xylophilus bicolor (p. 182).

To the Mexican locality given, add:—Near the city (*Höge*), Tlalpam, Amecameca (*Flohr*).

Found in numbers by Mr. Flohr on oaks near the city of Mexico. This species varies greatly in the colour of the elytra, from black with a flavo-testaceous or testaceous humeral patch (as in the type) to entirely testaceous. The following forms may be noticed:—

(1). Elytra black, with a transverse, rounded, or oblique humeral patch testaceous.

(2). Elytra piceous or brown, with an oblique patch extending from the shoulders downwards and a large patch of variable size on the disc beyond the middle testaceous*, these markings sometimes confluent.

(3). Elytra entirely testaceous.

* The Mexican *Xylophilus* mentioned by me, *antèa*, p. 190, nota, belongs to this form of *X. bicolor*.

All the forms were obtained together at Tlalpam, but from Amula and Amecameca only the typical form has been received.

24 (A). **Xylophilus appendiculatus.** (Tab. XXI. fig. 9, ♂.)

♂. Moderately elongate, parallel, shining; the head (the eyes excepted), prothorax, and scutellum rufo-testaceous, the elytra black, with a transverse humeral patch yellow; the antennæ obscure rufo-testaceous, with the basal three joints yellow; the legs flavo-testaceous, with the hind femora (except at the base) black, and the hind tarsi and the apical third of the hind tibiæ infuscate; the under surface (the head and prothorax excepted) black; the entire upper surface thickly, moderately coarsely punctured, and very finely, sparsely pubescent, the pubescence not hiding the punctuation. Head rounded at the sides behind the eyes, the latter moderately large and rather widely separated; antennæ slender, thickening outwardly, very elongate, joint 2 stout, about half the length of 3, the latter shorter than 4, 4–10 not differing much in length, longer than broad, 11 stout, twice as long as 10, ovate, obliquely acuminate; prothorax as long as broad, convex, with the sides parallel behind and slightly rounded in front, the disc with a very feeble arcuate depression in the middle behind; elytra nearly twice as wide as the prothorax, moderately long, parallel in their basal half, obliquely depressed on the disc below the base; legs moderately elongate, slender; the hind femora with a narrow pouch-like appendage along their inner edge ending abruptly a little before the apex (thus appearing angularly dilated), and a large rounded prominence on their anterior face towards the tip—this prominence being formed by a rounded lamellate process, which is abruptly twisted and bent downwards, and is only partly visible from above,—their lower face deeply concave beneath this; the intermediate tibiæ deeply triangularly notched on their outer edge near the apex.

Length $2\frac{1}{4}$ millim.

Hab. MEXICO, Amecameca in Morelos (*Flohr*).

One specimen only of this extraordinary insect has been received. *X. appendiculatus* is coloured exactly like the typical form of *X. bicolor*, which occurs at the same locality; but differs from it in its more elongate, more parallel shape, very elongate antennæ, and extraordinary male characters. The hind femora (♂) are greatly thickened towards the apex. *X. quadrisignatus* is the only other species of the genus known to me with the hind femora thickened on their anterior face in the male sex.

30 (A). **Xylophilus obliquus.** (Tab. XXI. fig. 10, ♂.)

♂. Elongate, parallel, slightly shining; the head pitchy-black, the prothorax brown, with the sides and base paler, the elytra obscure testaceous, with the apex and a rather broad oblique streak on the disc of each beyond the middle brown, the antennæ, palpi, and legs testaceous; the upper surface finely, rather densely pubescent, the pubescence partly hiding the punctuation. Head rather broad, minutely punctured, narrowly extended on either side behind the eyes, the latter very large, somewhat narrowly separated; antennæ long and slender, joint 2 very short, not half the length of 3, 3–5 very elongate (the other joints broken off); prothorax a little broader than long, much narrower than the head, narrowed in front, the disc deeply canaliculate anteriorly, and with a deep, transverse, subarcuate depression behind and a transverse groove on either side about the middle, the surface closely, minutely punctate; elytra elongate, nearly twice as wide as the prothorax, parallel for three-fourths of their length, densely, moderately finely punctate, the disc with a deep oblique groove extending from the shoulders inwards; legs very elongate and slender, the femora and tibiæ unarmed.

Length 2 millim.

Hab. MEXICO, Amecameca (*Flohr*).

One male example. In its elongate, parallel shape, this species approaches *X. argen-*

tatus, *X. anthicoides*, &c.; but it differs from all these in its large eyes and slender antennæ, the latter with very short second joint. The coloration of the elytra is different from that of any of the other species of the genus here described.

30 (B). **Xylophilus canescens.** (Tab. XXI. fig. 11, ♀.)

♀. Moderately elongate, slightly shining; piceous, the antennæ and legs obscure testaceous; the upper surface somewhat thickly clothed with rather long ashy pubescence, the pubescence partly hiding the dense punctuation, the latter very fine upon the head and prothorax, coarser upon the elytra. Head considerably wider than the prothorax, narrowly extended on either side behind the eyes, the latter moderately large, separated by a space about equal to the width of the eye as seen from above; antennæ scarcely extending to the middle of the elytra, slender, thickening a little outwardly, joints 1 and 2 stout, 2 much shorter than 1, 3 slender, considerably longer than 2, 3–10 gradually increasing in width, but almost equal in length, 11 ovate, very much longer than 10; prothorax a little broader than long, rather convex, slightly narrowed in front, the disc canaliculate anteriorly, and with a very deep, arcuate depression behind and a transverse groove on either side about the middle; elytra moderately long, about twice as wide as the prothorax, widest beyond the middle, parallel anteriorly, depressed along the suture at the base, and with a shallow oblique groove on the disc extending from the shoulders inwards; legs very slender, moderately long.

Length 2 millim.

Hab. MEXICO, Real del Monte 9300 feet (*Flohr*).

One female example. This species comes near the preceding, *X. obliquus*, but has the first and second joints of the antennæ stouter, the second not so short, the third not twice the length of the second. The insect is of a uniform piceous colour, clothed with rather long ashy pubescence. The slender limbs, deeply foveate thorax, &c., separate it from *X. funereus* and its allies.

Xylophilus argentatus (p. 186).

Mr. Flohr has sent us the fragmentary remains of a *Xylophilus* from Jalapa, Mexico, which belong to *X. argentatus* or to a closely allied species. This insect has a brown spot on the disc of each elytron close to the base (of which there is no trace in *X. argentatus*) and a triangular blackish-brown patch beyond the middle, this patch very deeply excised in the middle behind; the rest of the upper surface very densely clothed with bluish-white pubescence.

31 (A). **Xylophilus lactineus.** (Tab. XXI. fig. 12.)

Elongate, rather narrow, parallel, black, very densely clothed with fine, scale-like, closely appressed, bluish-white pubescence; the elytra each with a rounded black patch on the disc beyond the middle, this patch slightly excised in the middle behind; the upper surface thickly and finely punctured, the punctuation hidden by the pubescence. Head as in *X. argentatus*; antennæ thickening a little at the apex, black, the two basal joints testaceous in one example, joint 2 scarcely shorter than 3, 5–10 subtriangular, decreasing in length, 9 and 10 about as broad as long, 11 much longer and stouter than 10, ovate, acuminate; prothorax as broad as long; elytra elongate, subparallel; legs slender, piceous, the tarsi paler, the femora and tibiæ clothed with bluish-white pubescence.

Length $2\frac{1}{4}$–$2\frac{2}{3}$ millim. (♀.)

Hab. MEXICO, Amecameca in Morelos (*Flohr*).

Two specimens. This species is closely allied to *X. argentatus*, but differs from it in having the dark patch on each elytron rounded (instead of triangular), not extending forwards at the side in front, and only feebly emarginate behind; the antennæ are a little thickened at the tip, and their second joint is very little shorter than the third.

Mr. Flohr informs me that the insect also occurs in the vicinity of the city of Mexico.

32 (A). **Xylophilus silaceus.** (Tab. XXI. fig. 13, ♂.)

Moderately elongate, rather broad, subopaque, pitchy-brown, or obscure brownish-yellow with the prothorax ferruginous, the head a little darker; the upper surface clothed with very fine, appressed, pruinose pubescence, which almost hides the punctuation; the head and prothorax exceedingly minutely, the elytra very finely, punctate. Head moderately large, rounded at the sides behind the eyes, the latter very small in both sexes; antennæ fusco-testaceous, slender—(♂) very elongate, thickening outwardly, joint 2 short, about half the length of 3, 3–8 very long, increasing in length, 9 and 10 a little shorter than 8, 11 longer and stouter than 10, ovate, acuminate—(♀) shorter, with the penultimate joints much less elongate; prothorax about as long as broad, compressed at the sides about the middle, and with a deep oblique groove on either side of the disc behind, the grooves separated by a short carina; elytra parallel in their basal half, with an oblique depression on the disc extending from the shoulders inwards; legs fusco-testaceous, elongate, slender, the femora and tibiæ simple in both sexes.

Length $1\frac{3}{4}$–$2\frac{1}{4}$ millim. (♂ ♀.)

Hab. MEXICO, Tlalpam (*Flohr*).

Three specimens, two males and one female. In its fine pruinose pubescence this species resembles *X. sericeus*; but it is more elongate than that insect, and has a smaller head, small eyes, and more elongate legs, the hind femora simple in both sexes. *X. silaceus* is perhaps nearest allied to *X. singularis*, with which it nearly agrees in the form of the head, antennæ, and legs.

CNOPUS.

Head very broad; eyes rounded, entire, prominent, moderately large, coarsely granulated, separated by a space equalling the width of the prothorax; antennæ elongate, with the second and third joints subequal in length and thickness; prothorax transverse, very much narrower than the head, with a deep, transverse groove before the base, and an oblique one on either side towards the apex; elytra short, broad, moderately convex, a little rounded at the sides; first and second ventral segments connate; legs very short and slender; the tarsi with their penultimate joint minute, their basal joint very short, scarcely longer than the following two joints united; the other characters as in *Xylophilus*.

The above generic name is proposed for a very minute insect from Mexico, of which we have received a single male example.

It differs from *Xylophilus* in having the basal joint of all the tarsi very short, scarcely longer than the following two joints united. The legs themselves are also much shorter than in that genus. The thoracic grooves are very deep and sharply defined.

1. **Cnopus flohri.** (Tab. XXI. figg. 14, ♂; 14 *a*, antenna; 14 *b*, hind leg.)

♂. Very short, moderately broad, shining; the head (the eyes excepted) and prothorax rufo-testaceous, the elytra black, the antennæ, palpi, and legs testaceous, the under surface (the head and prothorax excepted) black; the upper surface very sparsely pubescent, the pubescence not hiding the sculpture. Head with a

few very minute scattered punctures, very narrowly, subangularly extended on either side behind the eyes; antennæ about three-fourths the length of the body, comparatively stout, thickening a little outwardly, joint 2 moniliform, shorter than 1, 3 as stout as 2, and about equal to it in length, 3–10 gradually increasing in length and width, all longer than broad, 11 ovate, acuminate, nearly twice as long as 10; prothorax transverse, moderately convex, the sides parallel behind and rounded and converging in front, the disc with a very deep, sharply defined, transverse groove before the base (extending across four-fifths of the entire width of the prothorax, and abruptly limited on either side), and an equally deep oblique groove on either side anteriorly, the surface with minute scattered punctures; elytra sparsely, moderately finely punctate, without trace of depression on the disc; femora unarmed, the tibiæ almost straight.

Length 1 millim.

Hab. Mexico, Jalapa (*Flohr*).

NOTOXUS (p. 203).

Notoxus ventralis (p. 207).

To the Mexican localities given, add:—Mexico city and Chalpultepec (*Flohr*).

Numerous examples of both sexes have been received from Mr. Flohr. The female has the elytra abruptly sinuate-truncate at the apex, with the sutural angles slightly produced. The male has a deep foveate depression at the apex of the last ventral segment. The arrangement of the elytral pubescence is constant, though the testaceous markings are sometimes indistinct.

TOMODERUS (p. 215).

Tomoderus brevicornis (p. 218).

To the localities given, add:—Mexico, Yautepec in Morelos (*Flohr*).

Tomoderus brevis (p. 219).

To the localities given, add:—Mexico, Motzorongo in Vera Cruz (*Flohr*).

ANTHICUS (p. 221).

Anthicus dilatipes (p. 231).

To the Mexican locality given, add:—Tepetlapa in Guerrero (*Flohr*).

A single male example, agreeing perfectly with the type.

15 (a). **Anthicus sturmi.**

Anthicus elegans, La Ferté, Monogr. Anthic. p. 117, t. 27. figg. 12, 14[1]; Lec. Proc. Acad. Phil. vi. p. 96[2] (nec Stev.).

Anthicus sturmii, La Ferté, loc. cit. p. 304.

Hab. North America, Carolina[1], Georgia, and Missouri[2].—Mexico, Taxco (*Flohr*).

One female specimen, agreeing very nearly with La Ferté's description.

Anthicus currax (p. 246). (Tab. XXI. fig. 15.)

To the Mexican locality given, add:—Vera Cruz (*Flohr*).

Found on the sea-shore, according to Mr. Flohr.

PENTARIA (p. 251).

Pentaria brunneipennis (p. 253).

To the Mexican locality given, add:—Chapantongo in Hidalgo (*Flohr*).

One specimen, larger than the type, with the elytra entirely brownish-testaceous, and the apical joint of the maxillary palpi infuscate.

TOMOXIA (p. 260).

Tomoxia spinifer (p. 261).

To the localities given, add:—Mexico, Temax in North Yucatan (*Gaumer*).

MORDELLA (p. 264).

16. **Mordella leucographa.**

Mordella leucosticta, huj. op. p. 279, Tab. XII. fig. 5 (nec Germ.).

MORDELLISTENA (p. 307).

27. **Mordellistena tenuipalpis.**

Mordellistena longipalpis, huj. op. p. 326 (nec Emery).

Mordellistena xanthopyga (p. 344).

To the Mexican locality given, add:—Jalapa (*Flohr*).

Var.? Smaller; the head, prothorax, pygidium, and hind legs almost entirely black, the elytra with the apices cinereo-pubescent.

Hab. Mexico, Jalapa (*Flohr*).

Two males, agreeing with the type in the form of the maxillary palpi in the male and in the number and position of the oblique ridges on the hind tibiæ and tarsi, but differing from it in colour and size.

PYROTA (p. 428).

1. **Pyrota palpalis.**

Pyrota terminata, huj. op. p. 429, Tab. XX. fig. 1 (♂) (nec Lec.).

Head (the eyes excepted), prothorax, and scutellum reddish-yellow, the prothorax with two transversely

placed spots of variable size on the disc, and often an additional spot on either side in front of these, black; the elytra yellow, with three broad black fasciæ—one immediately below the base, one slightly postmedian, and the third apical, the anterior two more or less excised in front and behind and not quite reaching the suture or lateral margin, the apical one excised in front and extending completely across; legs reddish-yellow, with the tips of the femora and of the tibiæ to a greater or less extent, and the tarsi entirely, black; antennæ black, the basal joint sometimes partly reddish-yellow; beneath reddish-yellow, the breast, abdomen, and coxæ more or less marked with black; palpi black; the entire upper surface shining. Head very sparsely punctured, the eyes large; apical joint of the maxillary palpi in the male very stout, transversely pyriform, concave and spongy-pubescent beneath, the second and third joints thickly clothed with long hairs on their lower face; antennæ strongly setaceous, joint 3 rather longer than 4 in the male, subequal with it in the female, the basal joint more elongate and more dilated at the apex in the male than in the female; prothorax longer than broad, narrowing anteriorly, the surface with a few, widely scattered, fine punctures, the disc foveate in the middle behind: elytra parallel finely and moderately densely punctate, with a few widely scattered coarser punctures, the disc with three feebly raised lines.

Var. The elytra, except at the base, more densely punctured and duller.

Length 9½–18 millim. (♂ ♀.)

Hab. Mexico, Villa Lerdo in Durango, Chihuahua City, Monterey in Nuevo Leon (*Höge*).

Capt. Casey, to whom I have communicated a specimen (♂), informs me that this insect cannot be treated as a variety of *P. terminata*, Lec., nor of *P. concinna*, Casey. According to him, it is somewhat intermediate, but differs from both by the structure of the maxillary palpi of the male and by the elytral maculation.

Pyrota divirgata (p. 433). (Tab. XXI. figg. 16, 17, ♂, varr.)

We figure two males of this species: one (fig. 16), a pale variety, from Matamoros Izucar; the other, from Chilpancingo (fig. 17), represents the var. *clavipalpis*, Haag.

Pyrota akhurstiana (p. 434). (Tab. XXI. fig. 18, ♀.)

Pyrota insulata (p. 434). (Tab. XXI. fig. 19, var., ♀.)

Pyrota mariarum (p. 435). (Tab. XXI. fig. 20, ♂.)

CANTHARIS (p. 437).

Cantharis mutilata (p. 439). (Tab. XXI. fig. 21, ♂.)

Cantharis subviolacea (p. 445). (Tab. XXI. figg. 22, ♂; 22 *a*, last ventral segment.)

Cantharis biguttata (p. 445). (Tab. XXI. figg. 23, ♀, 24, ♂, varr.)

We figure two specimens of this species: one, a dark-coloured female, from Villa Lerdo; the other, from Guanajuato, represents a male of the var. *bivirgata*, Dugès.

Cantharis gentilis (p. 448). (Tab. XXI. fig. 25, ♂.)

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Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

1♂ STATIRA GLABRATA.
2♂ " UNIDENTATA.
3♂ " INTERRUPTA.
4♂ " CHIRIQUINA.
5♂ " VARIABILIS.
6♂ " " , *var.*
7♂ " AGREFORMIS.
8♂ " INGENS.

9♂ STATIRA MELANOCEPHALA.
10♂ " COLLARIS.
11♂ " CÆRULEIPENNIS.
12♂ " LIMBATA.
13♂ " METALLICA.
14♀ " INCONSTANS.
15♂ " VIRIDICOLLIS.
16♂ " FOVEICOLLIS.
17♀ " CRASSICORNIS.

18 STATIRA ISTHMICA.
19♂ " MULTIFORMIS.
20♂ " VILIS.
21♀ " IGNITA.
22♀ " CUPREOTINCTA.
23♂ " VERÆPACIS.
24♂ " CURTICOLLIS.
25♂ " ÆRATA.

W. Purser, lith.
Hanhart imp.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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1♂ STATIRA MEXICANA.
2♂ " NIGROSPARSA.
3♂ " PENICILLATA.
4♀ " TUBEROSA.
5♀ " TUBERCULIFERA.
6♂ " CONSPICILLATA.
7 " " *var.*
8♂ " PULCHELLA.
9♂ " NIGROMACULATA.
10♀ STATIRA NIGROMACULATA, *var.*
11♀ " TRIANGULIFER.
12♀ " EVANESCENS.
13♀ " VERÆCRUCIS.
14♀ " PICTA.
15♂ " ALBOLINEATA.
16♀ " HORRIDA.
17♂ " NIGRIPENNIS, *var.*
18♀ STATIRA NIGRIPENNIS, *var.*
19♂ " NIGROÆNEA, *var.*
20♂ " CRIBRATA.
21♂ " CILIATA.
22♀ " PILIPES.
23♂ " MARMORATA.
24♂ " MICROPS.
25♂ " ALBOFASCIATA.
26 " IRREGULARIS, *var.*

W. Purkiss lith.
Hanhart imp.

Coleoptera. Pl. IV. Vol. 2. Pl. 2.

Cyrtodactyla Hinc.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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1 STATIRA LEVICOLLIS. 9,9a–c♂ UROPLATOPSIS IMITATOR. 18♂ SPHRAGIDOPHORUS VIOLACEUS.
2♀ " MINIMA. 10♂ " VERMICULATA. 19,19a–c♂ MENISCOPHORUS COSTATUS.
3♂ " BICOLOR. 11♀ " RETICULATA. 20,20a–c♂ COLPARTHRUM DECORATUM.
4♂ " ASPERATA. 12♂ " MIMICA. 21,21a,b,♂ " SULCICOLLE.
5♂ " MULTIPUNCTATA. 13♂ " SIMULANS. 22♂ " VITTICOLLE.
6♂ " HIRSUTA. 14♀ " EXCAVATA. 23♀ " CALCARATUM.
7♀ " PUBLENSIS 15♂ " APPENDICULATA. 24,24a–c,♂ OTHRYADES FRAGILICORNIS.
8♀ " LEPTOTRACHELOIDES. 16,16a–c,♂ EPICYDES OCULATUS. 25 RHOSACES CLAVIPES.
17,17a–c,♂ SPHRAGIDOPHORUS CYANIPENNIS.

W. Purkiss lith. Hanhart imp. 522.

Coleoptera. Pl. IV. Pls. 2. Tab. 3.

Ofv. af K. Vet. Akad. Förh.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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Blue Cyan Green Yellow Red Magenta White 3/Color Black

1 STILPNONOTUS THOMSONI.
2 EUSTROPHUS MARGINATUS.
3 " OVATUS.
4 EUSTROPHOPSIS NIGROMACULATUS.
5 " ROTUNDATUS.
6, 6a-d " OCHRACEUS.
7 " DISCOIDEUS.
8 " BIPUNCTATUS, *var.*
9 ORCHESIA GUATEMALENSIS.
W. Purkiss lith.

10 MICROSCAPHA MINUTA.
11, 11a-c, ♂ CUPHOSIS ARTENUATUS.
12 ♂ DIRCAEA MEXICANA.
13 " PILIVENTRIS.
14 " LONGICORNIS.
15, 15a-d, ♀ XEUXES BREVICOLLIS.
16, 16a-c DRANCES ANGUSTATUS.
17 SYMPHORA TROPICALIS.

18 SYMPHORA APICALIS.
19 " MACULATA.
20 " CONVEXA.
21, 21a-c, ♂ CANIFA SPECIOSA.
22 " CIRCUMDATA.
23, 23a-d, ♂ EVALCES GRISEUS.
24 " SINUATIPES.
25, 25a, ♂ OSPHYA TUBERCULIVENTRIS.
26 ♀ MYCTERUS DEPRESSUS.
Hanhart imp. 525.

Blatt. Gentr. Am. *Coleopteren Tab. IV Fig. 2, Tab. 4.*

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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Blue Cyan Green Yellow Red Magenta White 3/Color Black

1,1*a*,♀ POLYPHRIA CRUX-RUFA.
2,2*a*,♂ CONOMORPHUS PILOSUS.
3 " BREVICORNIS.
4 " GRACILICORNIS.
5,5*a*,♂ CLEODÆUS RUGICEPS.
6,6*a*,♂ PHYSCIUS CONICUS.
7,7*a*,♂ THISIAS MARMORATUS.
8,8*a*,♂ SPITHORATES SETOSUS.
9 SPITHORATES MACULATUS.
10 SOSTHENES DYSCHIRIOIDES.
11 SALPINGUS QUICHENSIS.
12,12*a-c* LANTHANUS VARIEGATUS.
13 " NITIDUS.
14 MICROTONUS FIGURATUS.
15 " GRACILIS.
16 " NITIDULUS.
17♂ " ELONGATUS.
18 MICROTONUS FUSIFORMIS.
19♂ CALOPUS MIXTUS.
20♂ " DEPRESSUS.
21 DITYLUS BRACHINOIDES.
22♂ " LONGICOLLIS.
23♀ " CEPHALOTES.
24♂ " MEXICANUS.
25♀ " BASALIS.

M.P. Durkiss del.

Harbart 536 imp.

Coleopterous Ill. Pl. 2. Tab. 7.

Biol. Centr. Amer.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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1,1a♂ DIPLECTRUS NIGRIPES.
2 ♂ " ANNULICORNIS.
3 ♀ " GIGANTEUS.
4,4a-c,♂ " NITIDICOLLIS.
5,5a-c,♂ DIPLECTRODES LONGICORNIS.
6 ♀ " FLAVICOLLIS.
7,7a-c,♂ VASACES ÆNEIPENNIS.
8♂ " COSTATUS.
9,9a-c,♂ SISENES CYANIPENNIS.

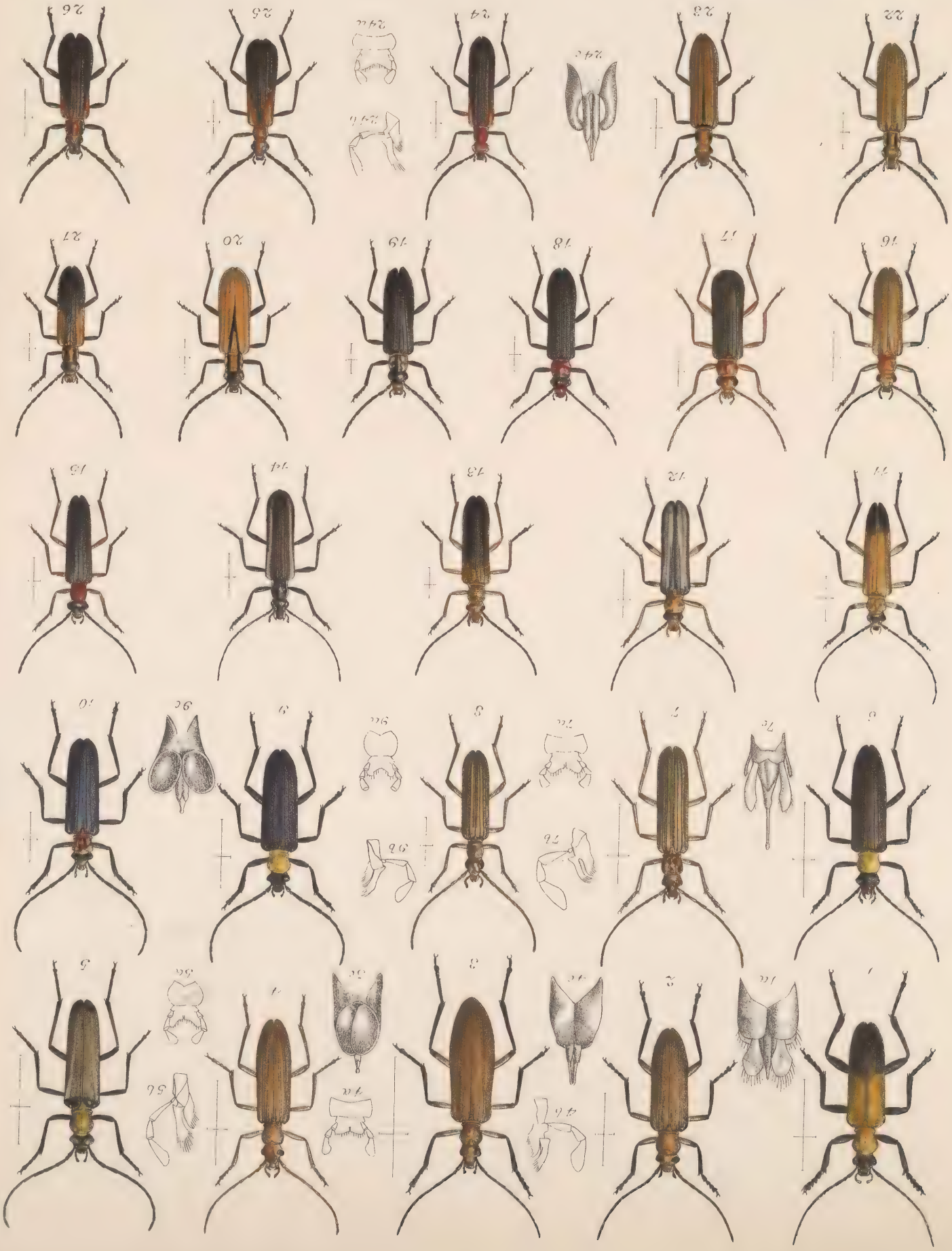
10♂ SISENES BOOPS.
11♂ " VARIANS.
12♀ " SUFFUSUS, *var.*
13♂ " PARASILOIDES.
14♀ " VITTATIPENNIS.
15♂ " RUBRICOLLIS.
16♀ " SINUALE, *var.*
17♀ " TESTACEIPES.

18♀ SISENES FOVEATUS.
19♀ " LINEATOCOLLIS.
20♀ " EXIMIUS, *var.*
21♂ " "
22♀ " DILATICORNIS.
23♀ " SUTURALIS.
24,24a-c,♂ " LYCIFORMIS.
25♀ " MIMETES.
26♀ " PERSONATUS.

W. Purkiss lith.

Hanhart imp.

536.



Coleoptera. Pl. IV. p. 244.

Ocular Dr. ad nat. del.

1,1a,b VODOMARUS 4-FOVEOLATUS.
2 COPIDITA PANAMENSIS.
3♂ „ TRIFOVEATA.
4♂ „ MACULICOLLIS.
5 „ APICALIS.
6 „ PARVULA.
7 „ NIGRIPENNIS.
8♂ OXACIS FEMORALIS.

9 OXACIS HOLOSERICEA.
10♀ „ MANDIBULARIS.
11♀ „ LITORALIS.
12♀ „ TEAPENSIS.
13 „ PICTIPENNIS.
14♂ „ BILINEATA.
15 „ PILOSA.
16♀ „ NITIDICOLLIS.
17♂ „ LINEATULA.

18♂ OXACIS CANA, *var.* β.
19♂ „ „ , *var.* α.
20 „ TRIMACULATA.
21 „ SCHISTACEA.
22 „ DUGESI.
23 „ VARIEGATA.
24,24a,b♀ PIRAS NASALIS.
25 „ BICOLOR.

W. Purkiss lith.

Hanhart imp.

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Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches

1♂ XYLOPHILUS FLABELLATUS.
2♂ „ STICTICUS.
3♀ „ AMULÆ.
4♂ „ TRIFASCIATUS.
5♂,6♀ „ BREVIRAMUS.
7, 7a,♂ „ LACERTOSUS.
8, 8a,♂ „ FORTICORNIS.
9♀ „ HUMERALIS.
10,10a,♂ „ CURVIPES.

11♀ XYLOPHILUS FLAVITARSIS.
12♀ „ V-NOTATUS.
13♂ „ 4-SIGNATUS.
14♂ „ CHIRIQUENSIS.
15♂ „ ÆQUINOCTIALIS.
16♂ „ SEXMACULATUS.
17,17a,♂ „ FRAGILIS.
18♂ „ BICOLOR.
19♂ „ UNIFASCIATUS.

20♂ XYLOPHILUS INFLATUS.
21,21a,♂ „ SERICEUS.
22,22a,b,♂ „ FEMORALIS.
23♂ „ ARGENTATUS.
24♂ „ SINGULARIS.
25 „ SUTURALIS.
26,26a-c,♂ „ ANTHICOIDES.
27 „ STIGMOSUS.
28♂ „ TANTILLUS.

W.Purkiss lith.

Hanhart imp.
546.

1♀,2♂ EURYGENIUS MEXICANUS.
3♂ „ LANUGINOSUS.
4♂ „ UNIFORMIS.
5♂,6♀ BACTROCERUS FASCICULATUS.
7,7*a*,*b* ♀ MACRATRIA PRINCEPS.
8,8*a-c* ♂,9,9*a* ♀ „ INCANA.
10♂ „ PARALLELA.
11♂ „ OBSOLETA.
12 MACRATRIA NIGRICORNIS.
13,13*a* NOTOXUS RUFICOLLIS.
14,14*a* ♂ „ IMPRESSUS.
15,15*a* ♀ „ EXIMIUS.
16,16*a* ♂ „ OPACUS.
17,17*a* ♂ „ VENTRALIS.
18,18*a* ♀ „ CRUCIFER.
19,19*a* ♀ „ ACUMINATUS.
20,20*a* ♀ NOTOXUS HIRSUTUS.
21,21*a* ♂ „ CALCARATUS.
22,22*a* „ MEXICANUS.
23,23*a* ♂ „ CRISTATUS.
24,24*a* „ PUEBLENSIS.
25,25*a* MECYNOTARSUS SEXNOTATUS.
26♀ TOMODERUS EXCAVATUS.
27 „ BREVICORNIS.

W. Purkiss lith.

Hanhart imp.

547.

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Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches

1 FORMICOMUS GRACILIPES.
2,2a ANTHICUS BITUBERCULATUS.
3,3a " CLAVICORNIS.
4,4a " DROMEDARIUS.
5,5a " 7-NOTATUS.
6 " 5-MACULATUS.
7 " CONCINNUS, *var.*
8 " PULCHELLUS.
9♂ " FOVEIVENTRIS.

10 ♂ ANTHICUS DILATIPES.
11 " PUNCTIPENNIS.
12 " ASPHALTINUS.
13,13a " BACTRIANUS.
14 " INVALIDUS.
15 " CONCOLOR.
16 " ISTHMICUS.
17 " SPINICOLLIS.
18 " STRIATOPUNCTATUS.
19 " 4-PLAGIATUS.

20 ANTHICUS EXIGUUS.
21 " BASIMACULA.
22 " PAUXILLUS.
23 " VICINUS.
24 " MACROCEPHALUS.
25 " 4-LUNATUS.
26 " LECONTEI.
27 " TETROPS.
28 " TEAPENSIS.

W. Purkiss lith.

Hanhart imp.
556

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Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

1 ♀, 1a ♂ DICLIDIA UNDATA .
2 PENTARIA TRISIGNATA .
3 " 4-GUTTATA .
4 " " ,var.
5 " UNIFASCIATA .
6, 6a, b NAUCLES TIBIALIS .
7, 7a COTHURUS IRIDESCENS .

8 ♀, 8a ♂ TOMOXIA SPINIFER .
9 ♀ " CONTRACTA .
10 ♂ " FULVICEPS .
11 " INTERRUPTA .
12 ♂ GLIPA HILARIS .
13 MORDELLA CLAVICORNIS, var.
14 " 4-SIGNATA .
15-18 " " ,var.

19-21 MORDELLA PICTA, var.
22 " METALLICA .
23 " ÆRUGINOSA .
24, 24a " DILATICORNIS .
25 " TRIANGULIFER .
26, 26a " SIGNATA .
27 " " ,var.

W. Perkins lith.

Harhartb imp 573

Black Beetles. Plate 1.

Coleoptera. Pl. 1. ♀ & Pl. H.

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
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Blue Cyan Green Yellow Red Magenta White 3/Color Black

1 MORDELLA TRIPARTITA . ARCUATA . 2 " SELLATA . 3 " TETRASPILOTA . 4 " LEUCOSTICTA . 5 " FLUCTUOSA . 6 " ACUTICAUDA . 7 " OCTOLINEATA . 8

9 MORDELLA SUBDOLA . 10,10a,♂ " CHEVROLATI . 11 " SEXNOTATA . 12 " DIMIDIATA . 13 " RUFOMACULATA . 14 " CRASSIPES . 15 " RUFOVITTATA . 16 " BADIPENNIS . 17 " FLAVOLINEATA .

18 MORDELLA FLAVOFASCIATA . 19 " FLAVONOTATA . 20 " NIGROMACULATA . 21 " LINEATIPYGA . 22 " UNIVITTATA . 23-25 " PUSTULOSA . 26 " SEPTEMNOTATA . 27 " MEXICANA .

W.Purkiss lith. Hanhart imp 575.

Geol. Coast. Illustr. *Coleoptera. Pl. IV. Figs. 1-27. Tab. 12.*

1♀	MORDELLA	LEUCOGRAMMA.	10,10a♂	MORDELLA	APICICORNIS.	19,19a,b♂	GLIPODES SERICANS.
2,2a♂	"	CINGULATA.	11	"	XANTHOSTICTA.	20,20a-c	CONALIA EBENINA.
3,3a,b♂	"	BIFORMIS.	12,12a	"	STICTICOPTERA.	21,21a	CALYCE FULVA.
4,4a♀	"	"	13,13a	"	VARICORNIS.	22,22a♂	MORDELLISTENA EPHIPPIATA.
5♀	"	RUTILICOLLIS.	14	"	PANAMENSIS.	23,23a,b♀	" LINEATOCOLLIS.
6	"	ERYTHROCEPHALA	15	"	T-ALBUM.	24♂	" "
7	"	TEAPENSIS.	16	"	PRETIOSA.	25,25a-c♂	" ÆQUINOCTIALIS
8	"	FLAVIFRONS.	17	"	TENUIPES.	26,26a♀	" "
9,9a	"	SERIATA.	18,18a♂	"	FENESTRATA.	27♀	" VALENS.

W.Purkiss lith.

Hanhart imp.

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Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches

1,1a♀ MORDELLISTENA CASTANEICOLOR. 9,9a♂ MORDELLISTENA OPALESCENTICEPS. 18♂ MORDELLISTENA INSTABILIS, *var.*

2 „ ISTHMICA. 10,10a,b♂ „ SANGUINICOLLIS. 19,19a,b♂ „ LONGIPALPIS.

3,3a♂ „ SEXMACULATA. 11,11a,b „ TRILINEA. 20,20a♂ „ DISCICOLLIS.

4,4a♀ „ „ 12,12a♂ „ HEXASTIGMA. 21,21a „ ATRIPENNIS.

5,5a,b „ CRASSIPYGA. 13,13a „ VENUSTA. 22,22a,b♂ „ NIGRICEPS.

6,6a♂ „ FORTICORNIS. 14♂ „ PICTIPENNIS. 23♀ „ CINEREONOTATA.

7♂ „ RUFONOTATA. 15♂ „ GUTTIFER. 24,24a♂ „ LUTEIFRONS, *var.*

8,8a,b♂ „ GRACILICORNIS. 16,16a-c♂ „ CRASSIPALPIS. 25,25a♂, 25b♀ „ LATICOLLIS.

17♂ „ INSTABILIS.

W. Purkiss lith. Hanhart imp. são.

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Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

1	MORDELLISTENA	BRUNNEIPILIS	10	MORDELLISTENA	MUTABILIS, *var.*	18,18 *a* ♀	MORDELLISTENA	XANTHOPYGA.
2,2 *a* ♂	"	RUBRICOLLIS.	11	"	" *var.*	19,19 *a,b*	"	NIGERRIMA.
3,3 *a* ♂	"	AZTECA.	12,12 *a*	"	ISABELLINA.	20,20 *a* ♂	"	ANNULIPYGA.
4,4 *a* ♂	"	SPARSA.	13	"	BASIMACULA.	21,21 *a*	"	CRUX.
5,5 *a* ♂	"	TESSELLATA.	14 ♂	"	FILICORNIS.	22 ♂	"	BEATA.
6	"	4-FASCIATA.	15	"	FLAVICORNIS.	23,23 *a,b* ♂	"	MINUTISSIMA.
7,7 *a,b*	"	DILUTA.	16,16 *a-c* ♂	"	DISTORTA.	24,24 *a*,♂,24 *b*,♀	"	PALPALIS.
8,8 *a*	"	ORIZABENSIS.	17,17 *a* ♂	"	CURVIMANA.	25,25 *a*	"	FASCICULATA.
9	"	MUTABILIS.				26,26 *a* ♂	"	FESTIVA.

W. Parkiss lith.

Hanhart, imp.

1♂,2,2a♀ PELECOTOMOIDES NUBILA.
3,3a♀ „ LINEATA.
4,4a♀ „ NEBULOSA.
5,5a♀ EMENADIA FLAVIPENNIS.
6♂ „ BIFOVEATA.
7♂,8♀ „ EXCAVATA.

9♂ EMENADIA CARINIPENNIS.
10♂ „ 8-MACULATA, *var*.
11♂ „ PECTINATA, *var*.
12♀ „ CRUENTA.
13,14♂,15,16♀ „ LIMBATA, *varr*.
17,18♀ „ DISCICOLLIS.
19,19a♂ RHIPIDOPHORUS REX.

20♀ RHIPIDOPHORUS LÆVICOLLIS.
21♂ „ FLAVIVENTRIS.
22,22a♂ „ TUBERCULATUS.
23♂ „ NIGER.
24♂ „ HYALINUS.
25♀ „ SIMPLEX.

W. Purkiss lith.

Hanhart imp.
584.

KODAK Color Control Patches
© The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters
Inches

Inches 1 2 3 4 5 6 7 8
Centimetres 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
KODAK Color Control Patches © The Tiffen Company, 2000
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black

1♂ MELOE TROPICUS.
2,2a♂ " DUGESI.
3♂ " LEVIS.
4♀ " GRACILICORNIS.
5♀ HENOUS CARDUI.
6♂ " MEXICANUS.
7 NEMOGNATHA CŒRULEIPENNIS, *v.* 15
8 MEGETRA CANCELLATA, *var.* 16
9, 9a-d♂ HORIA AURICULATA. 10 CYSTEODEMUS WIZLIZENI. 11 NEMOGNATHA BREVICOLLIS. 12 " FOVEIFRONS. 13 " EPHIPPIATA. 14 " TARASCA, *var.* 15 " ZONITOIDES. 16 " FLAVA.
17 GNATHIUM MINIMUM, *var.* 18 ZONITIS FLOHRI. 19 " TENEBROSA. 20,21 " SANGUINICOLLIS. 22 " LATERITIA. 23,23a " NIGROMACULATA. 24,25 " FULVA, *var.* 26 " MEGALOPS.

W. Pustkuss lith. Champion VD 1928.

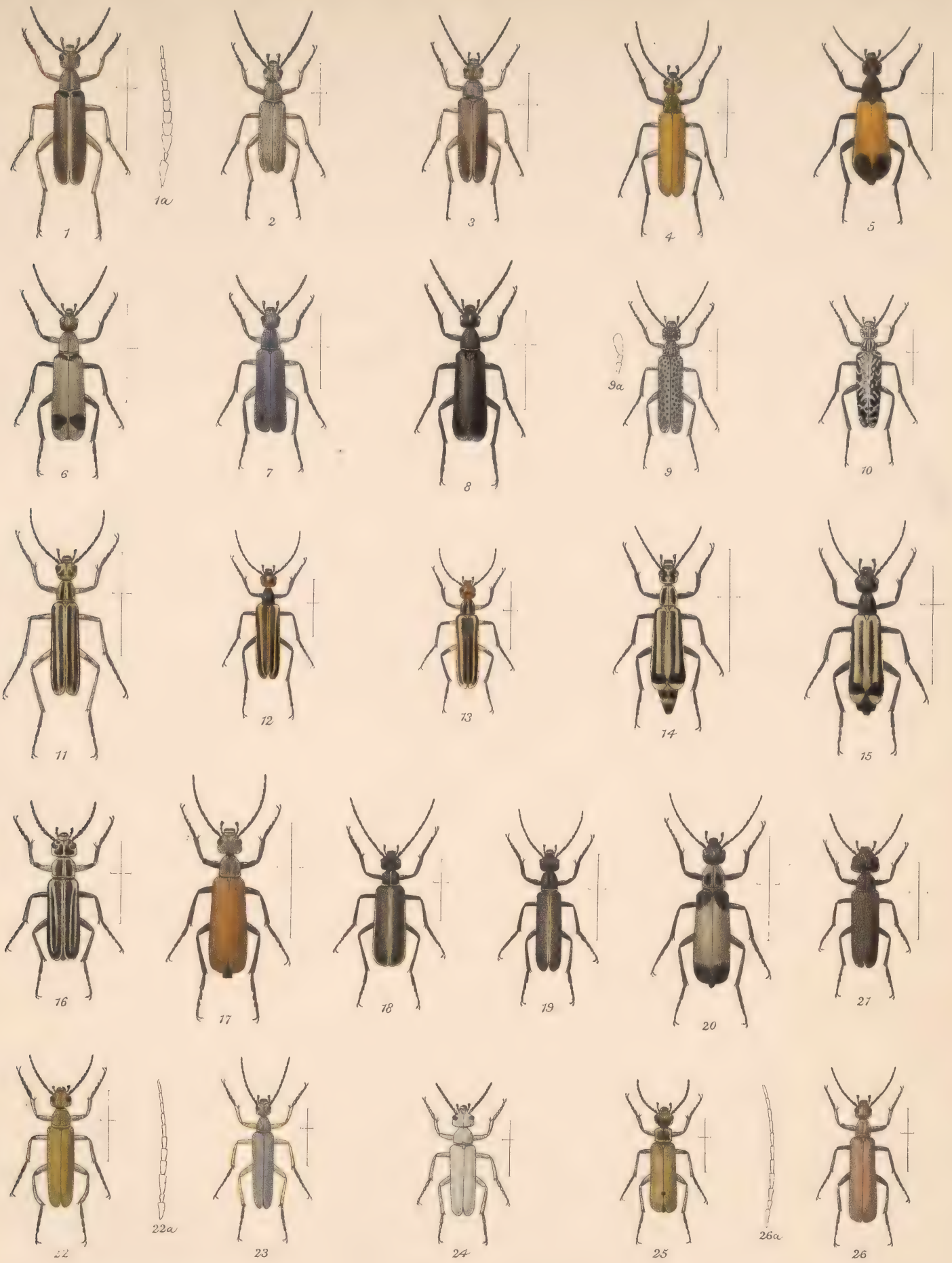
Hanhart. imp. 586

Biol. Centr.-Am. Coleoptera. Pl. IV (Pl. 9, Pl. 17.)

1–6 TETRAONYX SEXGUTTATUS, *varr.*
7 „ BATESI.
8 „ BIPARTITUS.
9 „ SALLÆI.
10 „ MACULATUS.
11 „ FRONTALIS.
12 CALOSPASTA MIRABILIS.
13♂ EUPOMPHA FISSICEPS.
14♂ CALOSPASTA SULCIFRONS.
15,15a♂ MACROBASIS FUMOSA.
16,16a♂ „ DISTORTA.
17,17a♂ „ PURPUREA.
18,18a♂ „ DISPARILIS.
19,19a♂ MACROBASIS DIVERSICORNIS.
20,20a♂ „ BECKERI.
21,21a♂ „ TENUICORNIS.
22,22a♂ „ SEGMENTATA.
23,23a♂ „ OCHREA.
24,24a♂ „ MEGACEPHALA.
25,25a♂ EPICAUTA CURVICORNIS.

W. Purkiss lith.
Hanhart imp.
589.

KODAK Color Control Patches © The Tiffen Company, 2000
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Kodak LICENSED PRODUCT
Centimeters
Inches



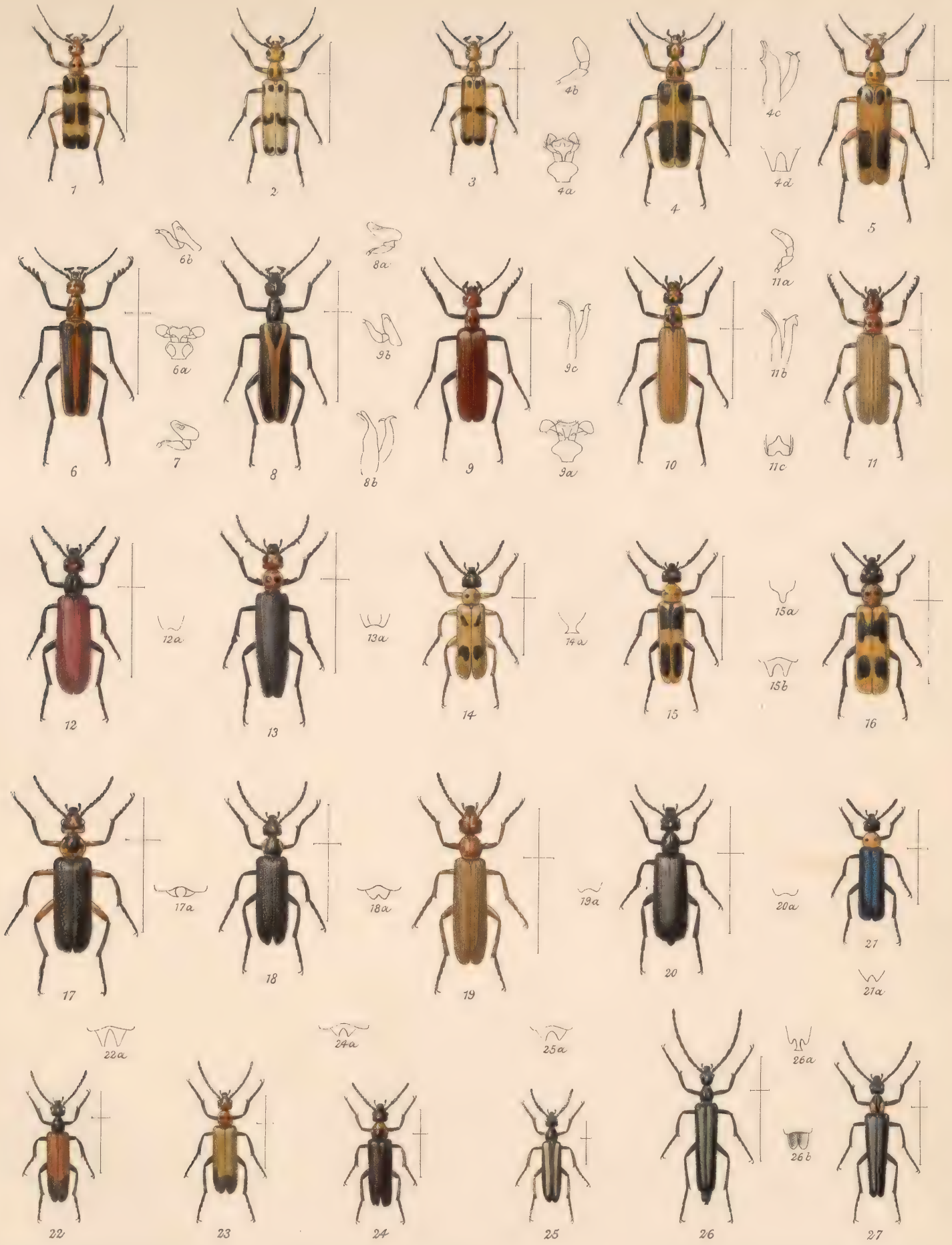
1,1a♂ EPICAUTA BASIMACULA.
2♂ „ RUFIPEDES.
3♀ „ „ ,*var.* CINCTELLA.
4♂ „ RUFIPENNIS.
5♂ „ TERMINATA.
6♂ „ FUNESTA.
7♂ „ PUNCTUM.
8♂ „ CINEREIVENTRIS,*var.*
9,9a♂ „ OCELLATA.

10♂ EPICAUTA PARDALIS.
11 „ VITTICOLLIS.
12 „ GRAMMICA.
13 „ UNILINEATA.
14 „ NIVEOLINEATA.
15 „ „ ,*var.*
16♂ „ ALBOLINEATA.
17♂ „ CARMELITA.

18 EPICAUTA CINCTIPENNIS.
19♂ „ CROCEICINCTA.
20♂ „ TRIPARTITA.
21♂ „ NEGLECTA,*var.*
22,22a♂ „ AURICOMANS.
23♂ „ LEUCOCOMA.
24 „ EMARGINATA.
25♀ „ SINGULARIS.
26,26a „ COMPRESSICOLLIS.

W. Purkiss lith.

Hanhart imp



1♂ PYROTA TERMINATA.
2♂ „ PUNCTATA.
3♂ „ MYLABRINA.
4,4*a-d*,♂ „ RUGULIPENNIS.
5♂ „ POSTICA.
6,6*a,b*,♂ „ TENUICOSTATIS.
7♂ „ DIVIRGATA.
8,8*a,b*,♂ „ DECORATA.
9,9*a-c*,♂ „ HIRTICOLLIS.

10♂ PYROTA NOBILIS.
11,11*a-c*,♂ „ 4-NERVATA.
12,12*a*,♂ CANTHARIS CARDINALIS.
13,13*a*,♂ „ ERYTHROTHORAX.
14,14*a*,♂ „ 4-MACULATA.
15,15*a,b*,♂ „ „ ,*var.*
16 ♀ „ „ ,*var.*
17,17*a*,♂ „ CORALLIFERA.

18,18*a*,♂ CANTHARIS INTRICATA.
19,19*a*,♂ „ SANGUINEA.
20,20*a*,♂ „ EREBEA.
21,21*a*,♂ „ BIPUNCTICOLLIS.
22,22*a*,23 ♂ „ PROTEUS, *varr.*
24,24*a*,♂ „ SIGNATICOLLIS.
25,25*a*,♂ „ SCITULA.
26,26*a,b*,♂ „ SANGUINEOGUTTATA, *var.*
27 ♀ „ „

W. Purkiss lith. Hanhart imp.
602.

KODAK Color Control Patches
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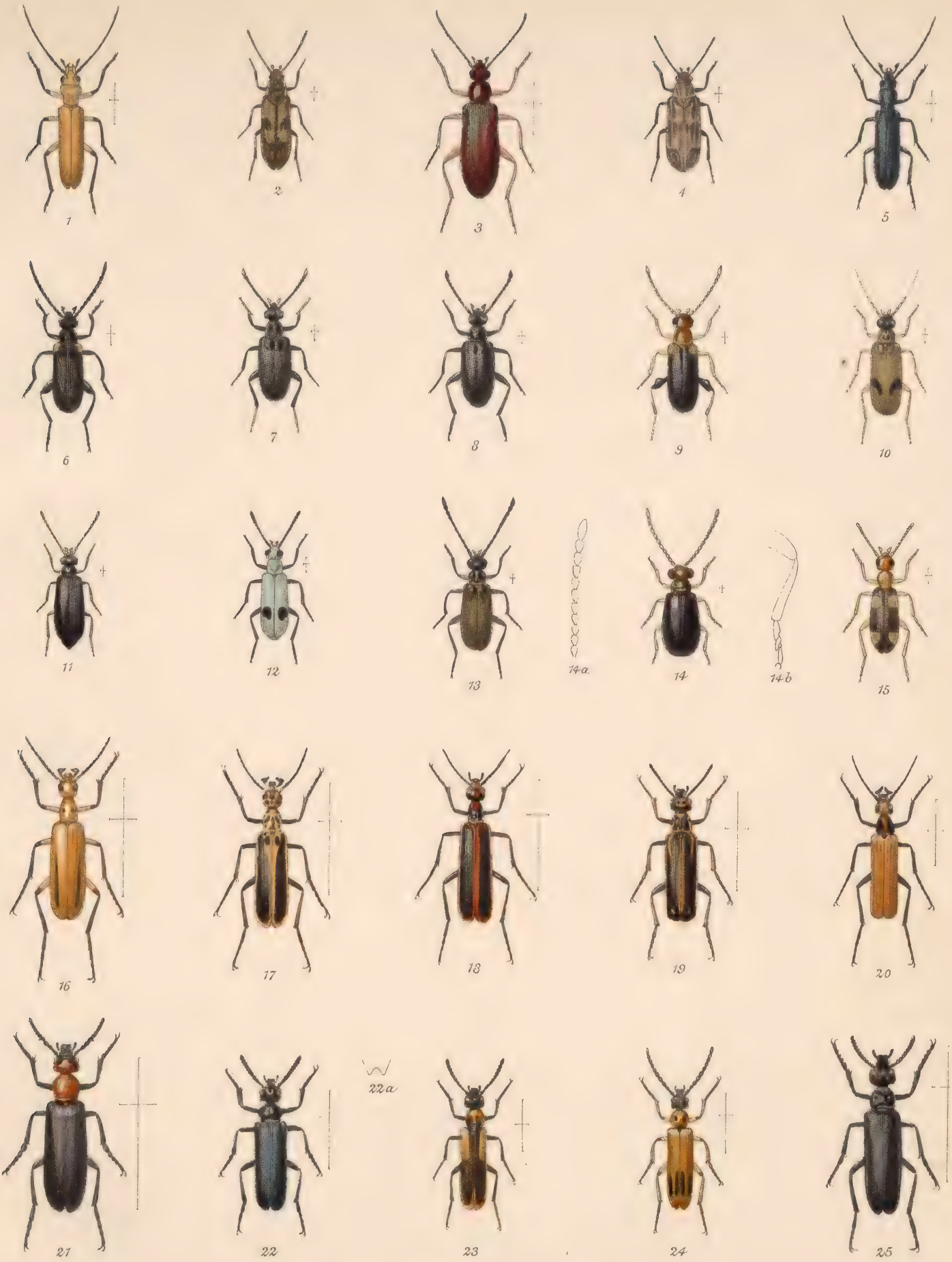
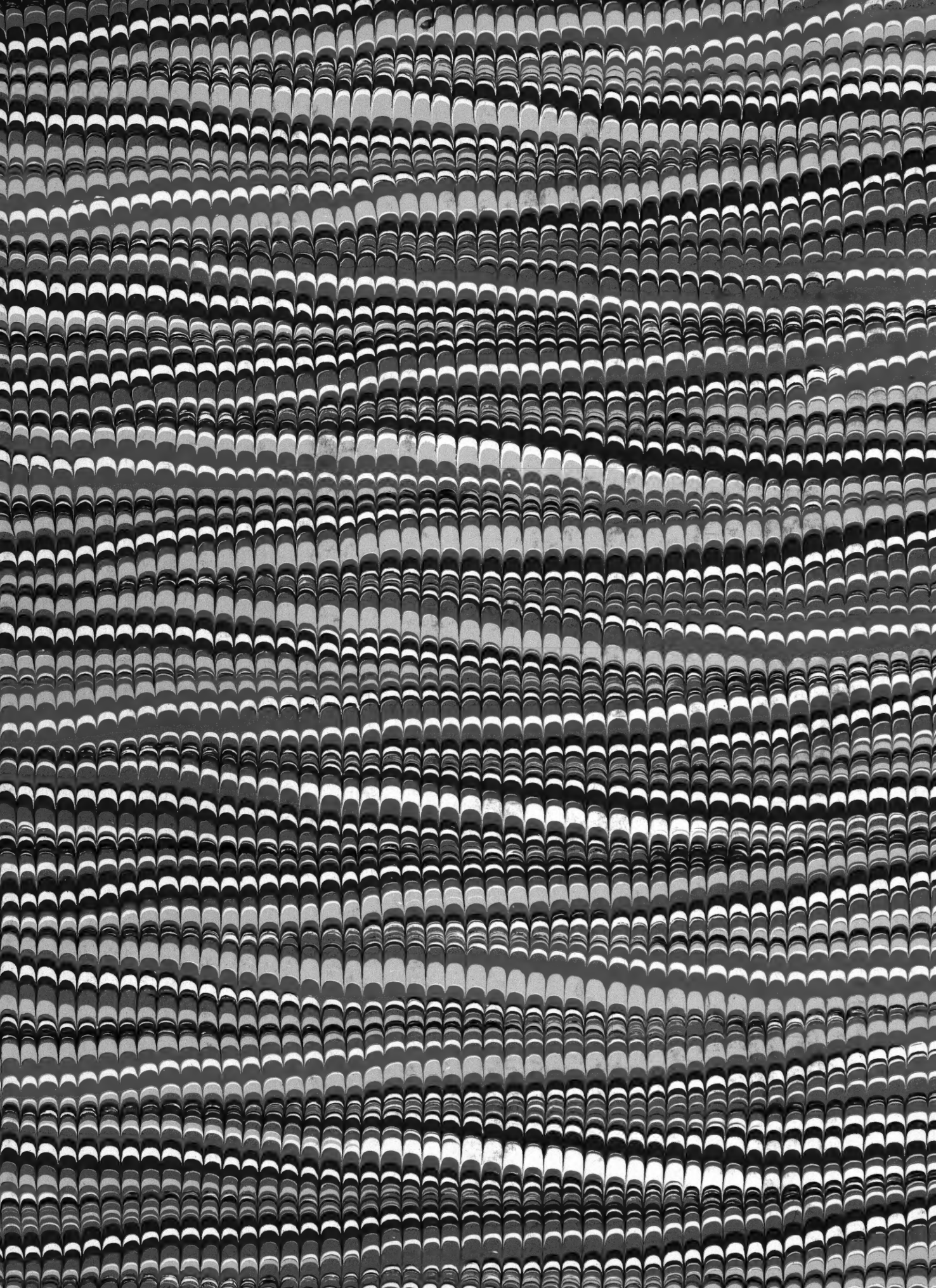
Kodak LICENSED PRODUCT
Blue Cyan Green Yellow Red Magenta White 3/Color Black
Centimeters 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
Inches 1 2 3 4 5 6 7 8

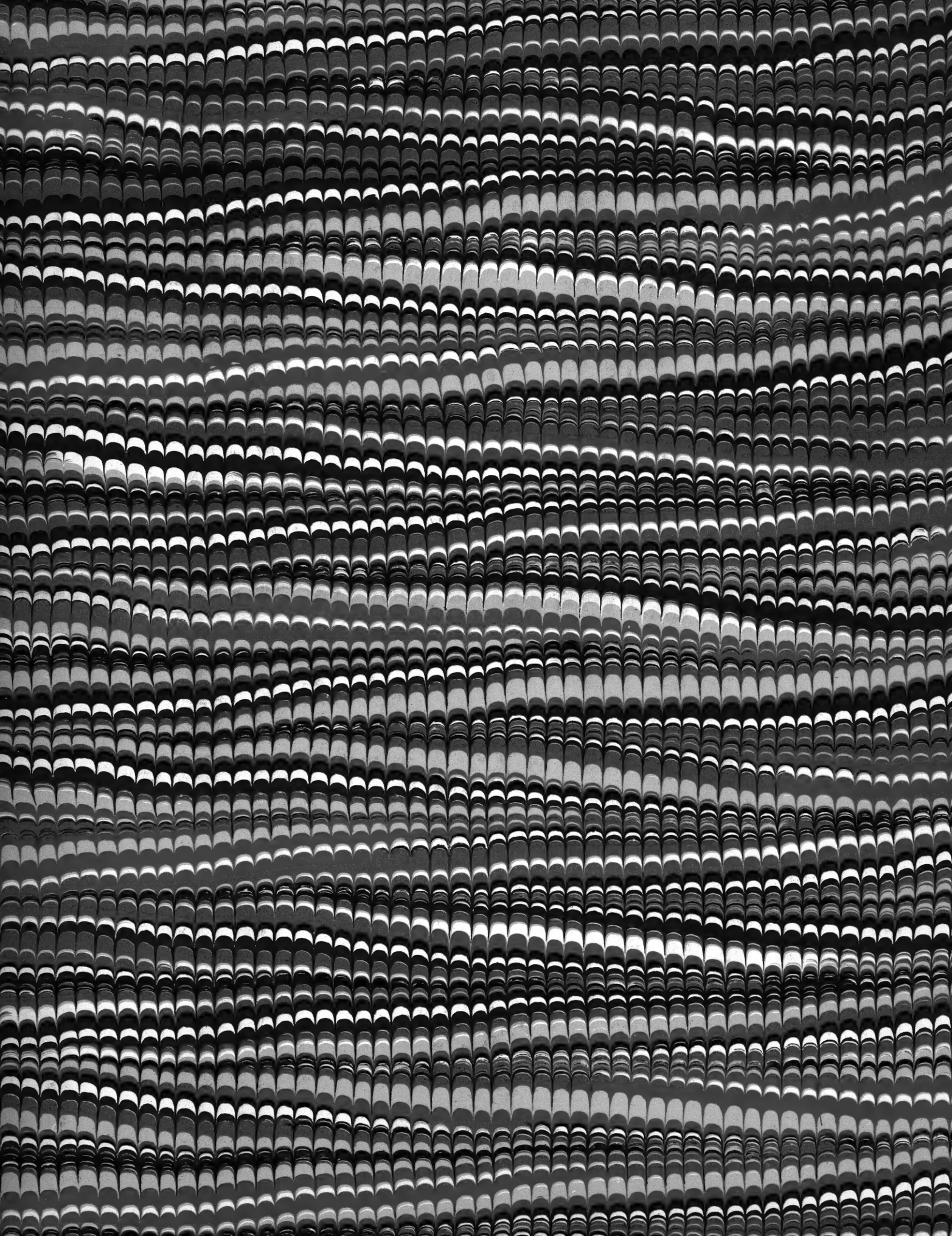


1 OXACIS CONSTRICTICOLLIS.
2 MICROTONUS TRIFASCIATUS.
3♂ STATIRA SPICULIFERA.
4 MICROTONUS STICTICOPTERUS.
5 OXACIS CÆRULEA.
6♂ XYLOPHILUS MEXICANUS.
7♂ » FLAVIPALPIS.
8♂ » GENICULATUS.
9♂ XYLOPHILUS APPENDICULATUS.
10♂ » OBLIQUUS.
11♀ » CANESCENS.
12 » LACTINEUS.
13♂ » SILACEUS.
14,14a,b CNOPUS FLOHRI.
15 ANTHICUS CURRAX.
16♂ PYROTA DIVIRGATA, *var*.
17♂ » » ,*r*. CLAVIPALPIS.
18♀ PYROTA AKHURSTIANA.
19♀ » INSULATA, *var*.
20♂ » MARIARUM.
21♂ CANTHARIS MUTILATA.
22,22a♂ » SUBVIOLACEA.
23♀ » BIGUTTATA, *var*.
24♂ » » ,*r*. BIVIRGATA.
25♂ » GENTILIS.

W. Purkiss lith.. . . Hanhart imp.
609.

12 Volume





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